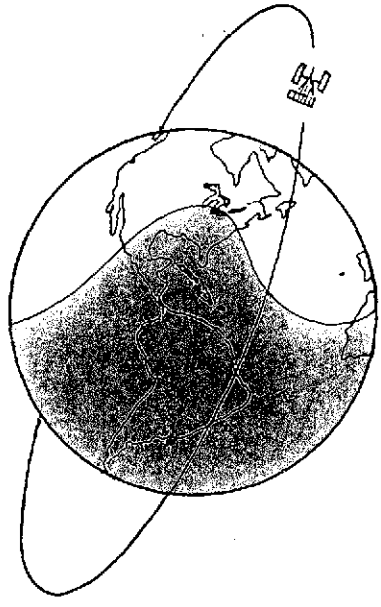
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# PHENOLOGY SATELLITE EXPERIMENT



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16. Abstract The detection of phenological events (Brown Wave - vegetation senescence, Green Wave - vegetation development) for specific forest and crop types using ERTS-1 imagery is described. The Brown Waves (1972-1973) and the Green Wave (1973) were detected at 24 sites located in four north-south corridors across the United States through analysis of ERTS-1 imagery and multispectral scanner digital tapes. Ground observations from these sites were correlated with ERTS data. These two phenological events were documented by observations from more than 3200 sites across the United States. Data handling techniques including computer analysis and photo-interpretation procedures are explained. Computer analysis of ERTS-1 multispectral scanner digital tapes in all bands was used to give the relative changes of spectral reflectance with time of forests and specified crops. Band-to-band ratios were developed and correlated with the fall and spring phenological changes in field crops and forests. Results from this study show that it is feasible to monitor by satellite phenological changes over large regions. In addition, crop identification and inventory are definitely within the realm of possibility. Satellite data from an ERTS-1 type system will make world-wide phenological monitoring possible. This is necessary to develop universally applicable phenoclimatic models.

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## Preface

The objective of the project is to develop techniques for identifying phenological changes and plant types on a broad scale. Phenological sequences studied were the Green Wave and the Brown Wave.

A well-coordinated nationwide network of 24 ground observation sites in four corridors was established. Three subsites were identified within each of the 10 test sites in the Rocky Mountain and Columbia Valley Corridors. These were (1) non-irrigated rangeland, (2) irrigated alfalfa fields, and (3) dryland wheat fields. Ground photography documentation of phenological events was continuous from the launch of ERTS-1 through November 1973.

Phenological data were recorded throughout the East and West during 1971, 1972, and 1973 on the phenological changes of selected indicator plants.

Computer programs were developed at Texas A & M University (Remote Sensing Center) and Purdue University (Laboratory for Applications of Remote Sensing) to process multispectral scanner measurements (MSS) of the Phenology Satellite Experiment test sites.

The problem of changing atmospheric and illumination conditions was studied by both LARS, Purdue University, and RSC, Texas A & M University. Tests indicated that corrections to Earth Resources Technology Satellite (ERTS) data for the Eastern Corridors may be necessary for sun angle change and for variations of water vapor and particulate matter in the atmosphere. In the clearer atmosphere over the Western Corridors, correction for sun angle change was the only correction necessary.

A quideline for assessing vegetation changes using ERTS-1 Satellite Imagery was prepared at the University of Maine for an Imagery Interpretation Workshop at Montana State University.

Work at the University of Maine and Cornell University has demonstrated that MSS imagery when analyzed with a Digicol Processor 4010-32 can reveal the spectral changes which occur during the Green and Brown Waves.

Analysis of digital data showed that a systematic decrease in reflectivity in the infrared channels occurred for the August to November period. This change reflects the progression of the Brown Wave with time at the different test sites. The progression of the Green Wave was associated with an increase in reflectivity in the infrared channels.

A number of equations were developed at Montana State University and the University of Maine in an effort to relate ground observations to Satellite MSS data. Of the several criteria (ground observed parameters) available for use in developing or evaluating algorithms the "percent green" for all foliage was chosen. This relates to the overall progress of the Green or Brown Waves and can be used on an individual crop basis or on a more general basis which includes all plant species at the test site.



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The Band-Ratio-Parameter (BRP) provides a responsive indication of greenness and in addition indicates the degree of leaf coloration and leaf fall for deciduous forests.

Density measurements on ERTS-1 transparencies were used to assess vegetation change. The individual band densities and band-to-band ratios depicted seasonal changes in vegetation very well.

An algorithm called "ABIO" was developed at Montana State University from ground and satellite data in the two western corridors to specifically identify alfalfa crops. This algorithm appears to show promise in identifying percent green, plant height and/or biomass.

Results from the Phenology Satellite Experiment show that it is feasible to monitor phenological changes over large regions of the earth by satellite.

Satellite data, such as that received from ERTS-1, will make worldwide phenological monitoring possible. This is necessary to develop universally applicable phenoclimatic models.

For countries with highly developed agriculture, such information would be useful in characterization of crop status, yield prediction, and management planning. Phenological data in less-developed countries could be useful for agricultural land use planning and for determining site suitability.

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## 1.0 INTRODUCTION

The Phenology Satellite Experiment is a temporal study of the variations in spectral properties of plants for various test sites in the United States. The broad aim of this project was to observe the temporal and geographical progression of the plant life cycle through the use of ERTS data. Two phenological sequences were studied:

(a) The Green Wave: A record of the geographical progression with time of foliage development over wide areas is the first step that must be taken toward a real time inventory of the yield potential, yield realization and crop management over extended crop and timber producing areas of the nation.

(b) The Brown Wave: A record of the geographical progression with time of vegetation senescence (maturation of crops, leaf coloration, and leaf abscission) plays the analogous role in the autumn as the Green Wave phenomenon does in the spring in terms of phenological predictors for vegetation management.

This study has been conducted by the NE-69 and W-48 Regional Research Technical Committees[1] as an extension of their ongoing research in the development of methods for evaluation and utilization of remotely sensed data pertinent to agricultural ecosystems by ERTS and aircraft.

The Phenology Satellite Experiment was coordinated and directed by Dr. B. E. Dethier, Professor of Meteorology, Division of Atmospheric Sciences, Department of Agronomy, Cornell University, Ithaca, New York.

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[1]Regional Research projects such as NE-69, Atmospheric Influences on Ecosystems and Satellite Sensing, and W-48, Climate and Phenological Patterns for Agriculture in the Western Region, are funded jointly by participating State Agricultural Experiment Stations and by federal regional research money from Cooperative State Research Service, USDA.

It used the established facilities of 16 State Agricultural Experiment Stations, their substations and Phenological Network Stations and benefits from the experience gained through 17 years of closely coordinated regional and interregional research projects.

About one-half of the cost of the research in Agricultural Research programs has been funded by the cooperating states and about one-half by federal (USDA) regional research money distributed through State Agricultural Experiment Stations.

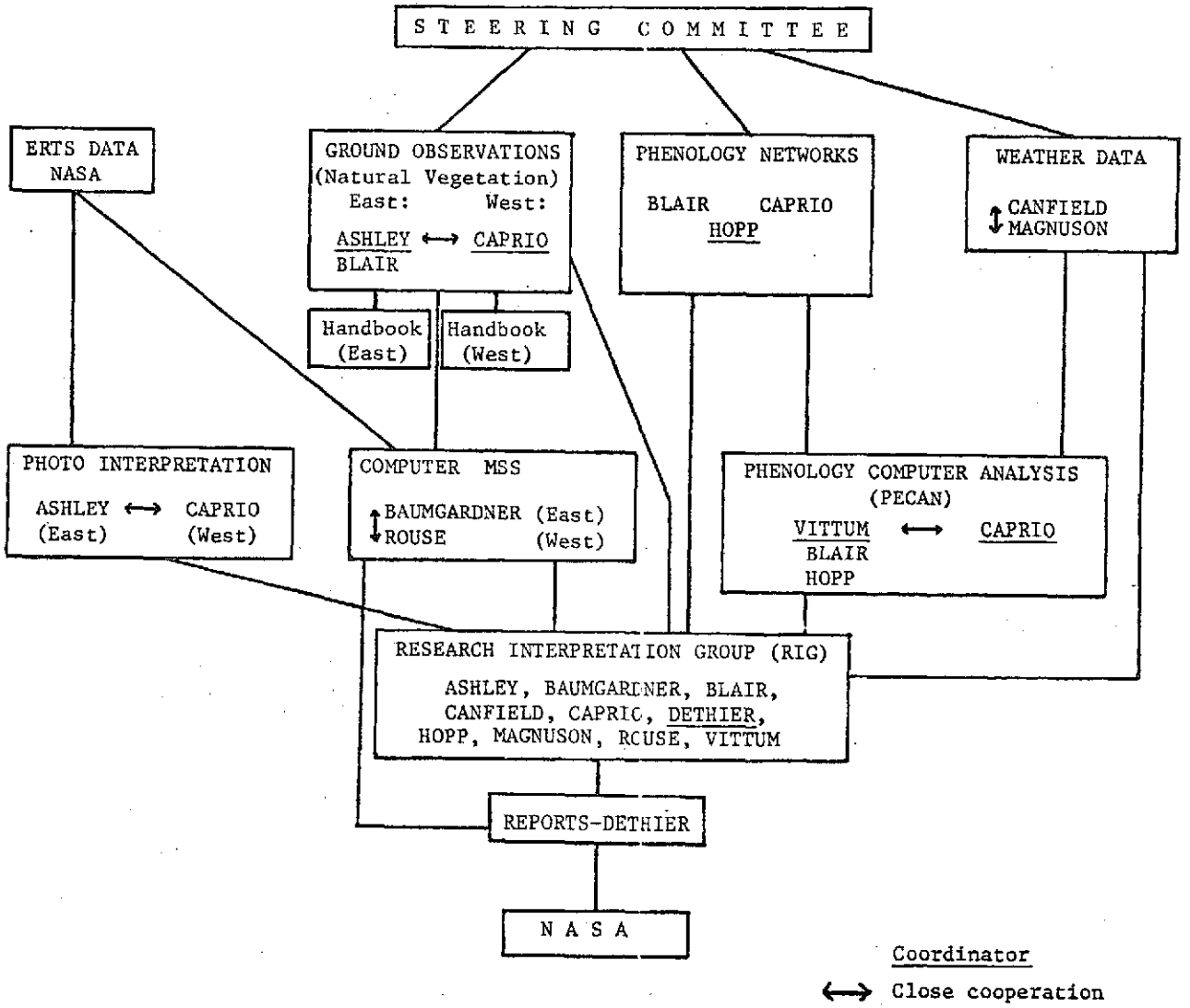
The diverse components of the ERTS-1 project necessitated close cooperation and coordination. To achieve the meaningful merging of research products, the following organization structure, as shown on page 3, was successfully implemented.

The composition of the Steering Committee and the affiliations of its members are shown in Appendix A as well as the cooperative investigators.

## 1.1 Background

Phenology is the science concerned with periodic biological events in their relation to seasonal climatic changes and is known as the science of appearances because emphasis is placed on dates of various occurrences. The term "phenology" appears to have been first applied in 1853 by the Belgian botanist, Charles Morren, to that branch of science which studies the periodic phenomena in the plant and animal world insofar as they depend upon the climate of any locality. The word phenology itself is derived from the Greek word "phaino", meaning to show. Plants can be used as indicators of climatic differences because the times of occurrence of phenological events of many plants is to a large degree controlled by the

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weather. Thus, phenology represents a merging of the meteorological and biological sciences, each contributing something to the other.

Phenological records for agricultural crops have been kept for many years at the agricultural experiment stations throughout the country. These data are valuable to the agricultural scientist because they provide a basis for comparing relative earliness or lateness of developmental stages for different crop varieties. Such comparisons are often used as a basis for selecting those particular varieties that are most adapted for specific locations, since effects of weather on crops are highly dependent upon concomitant stages of plant development. However, once a crop variety has been proven most adaptable for the places where it has been tested, it is not always possible to specify where it will grow most successfully because too little is known about the nature of climate and the developmental behavior of plants in areas away from the experimental sites. This gap of information can be narrowed by the use of phenological indicator plants which reflect climatic contrasts between locations through their differential rate of seasonal development.

The observation of phenological events at numerous locations, resembling in some respects national climatological networks, provides useful information for many aspects of human activity, but is particularly important for application in agriculture.

Localized phenological observations have been made in the United States from time to time and usually were terminated after a number of years. However, phenological networks started in Montana in the mid 1950's provided the impetus for the establishment of new phenological networks and the expansion of existing networks in the western, north-central and

northeastern regions using clonally propagated plant material. The phenology networks (Fig. 1) now cover 40 states and 5 Canadian Provinces and include over 3200 sites. Standardized instructions were developed to insure uniformity in gathering of the data. Many observation sites are located near weather stations to allow for comparisons between phenological data and meteorological parameters.

As an example of the Green Wave (record of plant development with time) is shown in Figure 2. These photographs of the development of Red Rothomagensis lilac were taken in the spring and summer of 1973 at Burlington, Vermont. They show that considerable advances in plant development may take place during the 18 days between satellite overpasses.

## 2.0 METHODOLOGY

### 2.1 Ground Observations

A well-coordinated nationwide network of 24 ground observation sites in four corridors (Fig. 3) was established and ground photography documentation of phenological events has been continuous since the launch of ERTS-1. Details of the 24 test sites are given in Appendix B. Typical corridor sites in Vermont and Montana are shown in Figures 4a and 4b, respectively.

Field procedures were established to obtain ground photography of the same scene on different dates coinciding with ERTS-1 overpasses. Manuals which describe these field procedures in detail (Appendix C for the East and Appendix D for the West) were distributed to the observers.

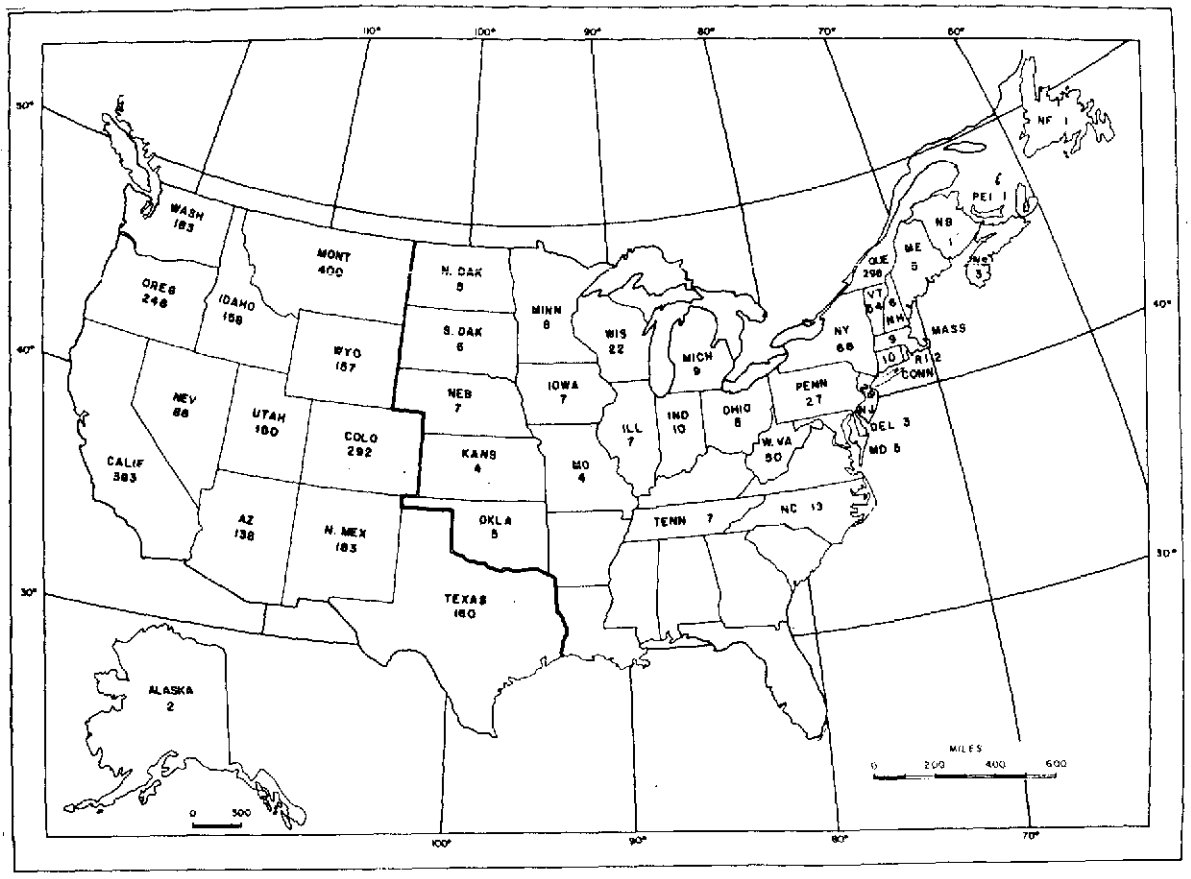



Figure 1. Phenology Networks. Numbers indicate total observation sites in each state or province.

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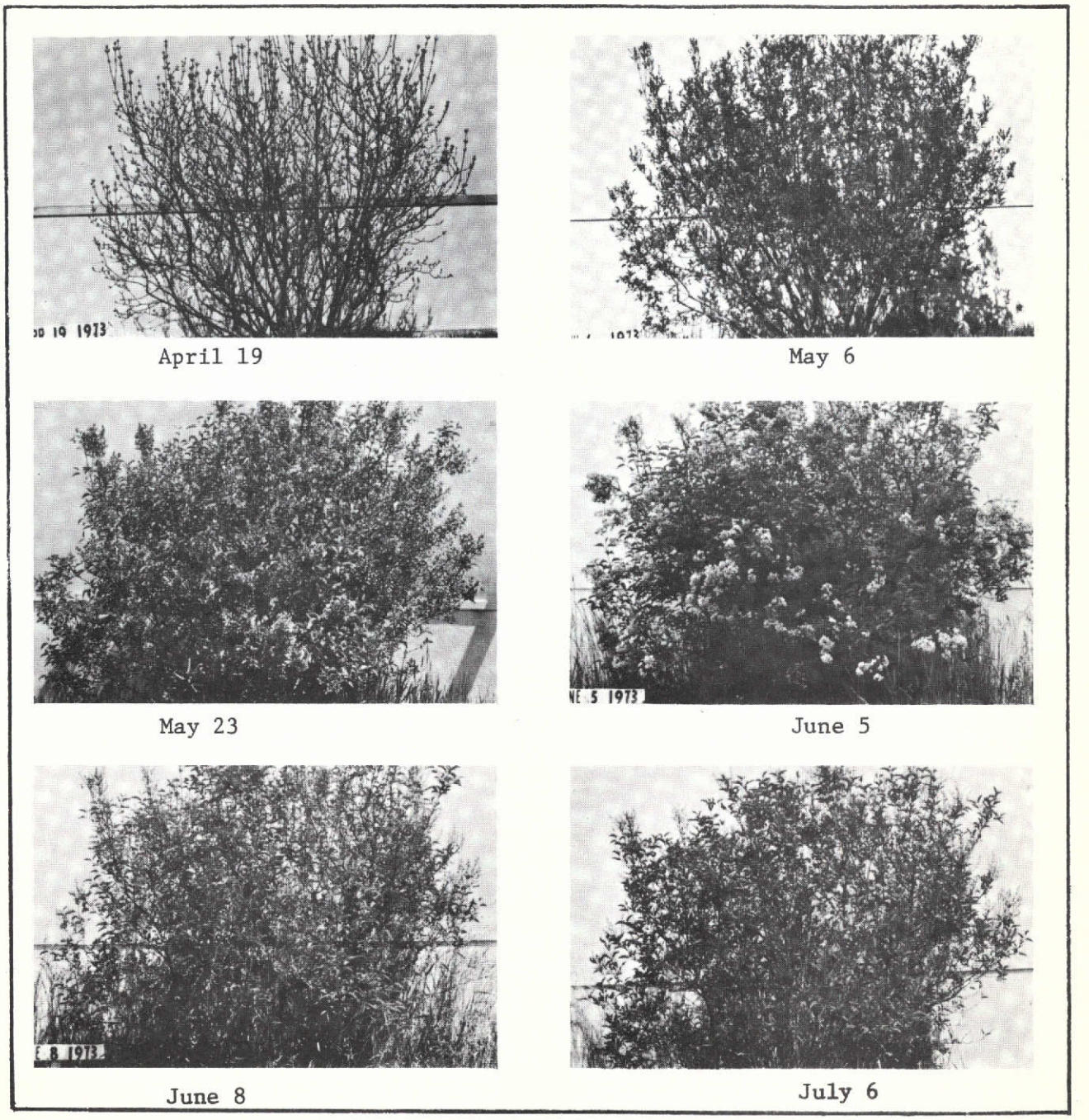



Figure 2. Green Wave (lilac development with time) at Burlington, Vermont, 1973.

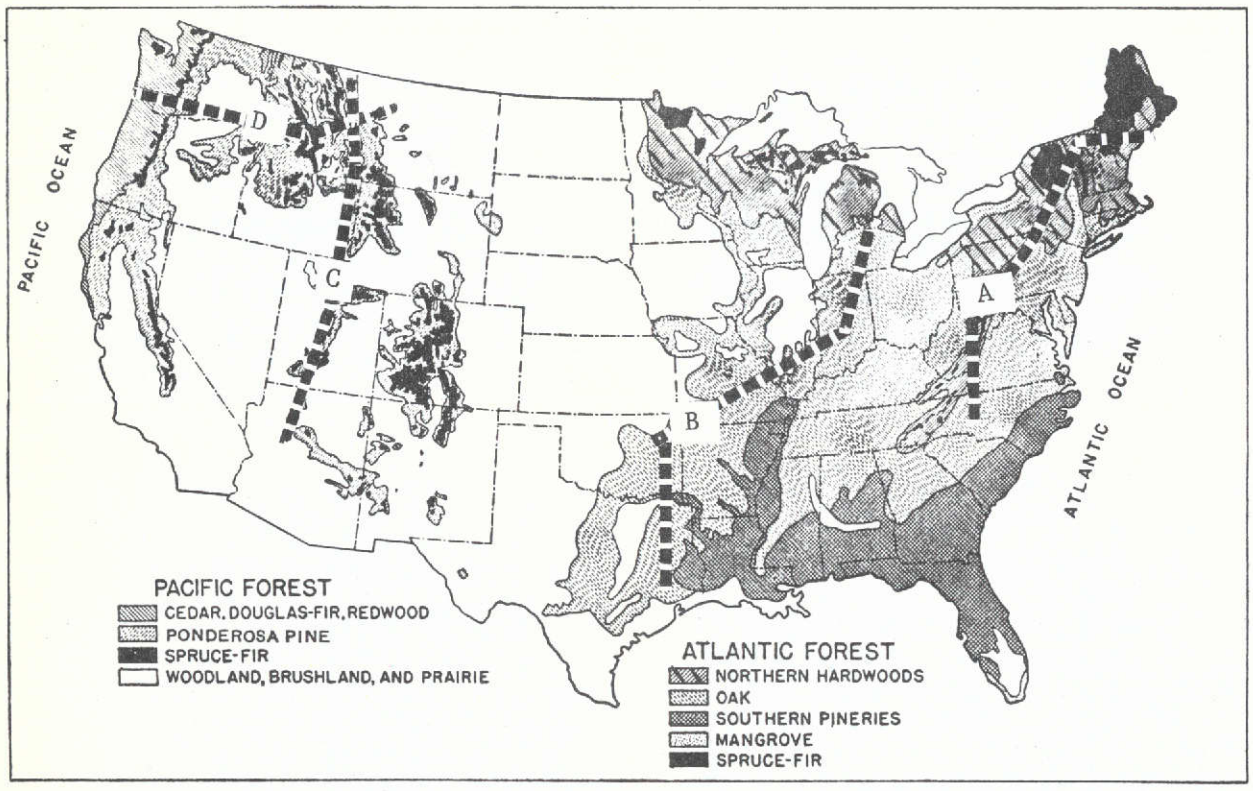



Figure 3. A - Appalachian Corridor, B - Mississippi Valley Corridor, C - Rocky Mountain Corridor, D - Columbia Valley Corridor.

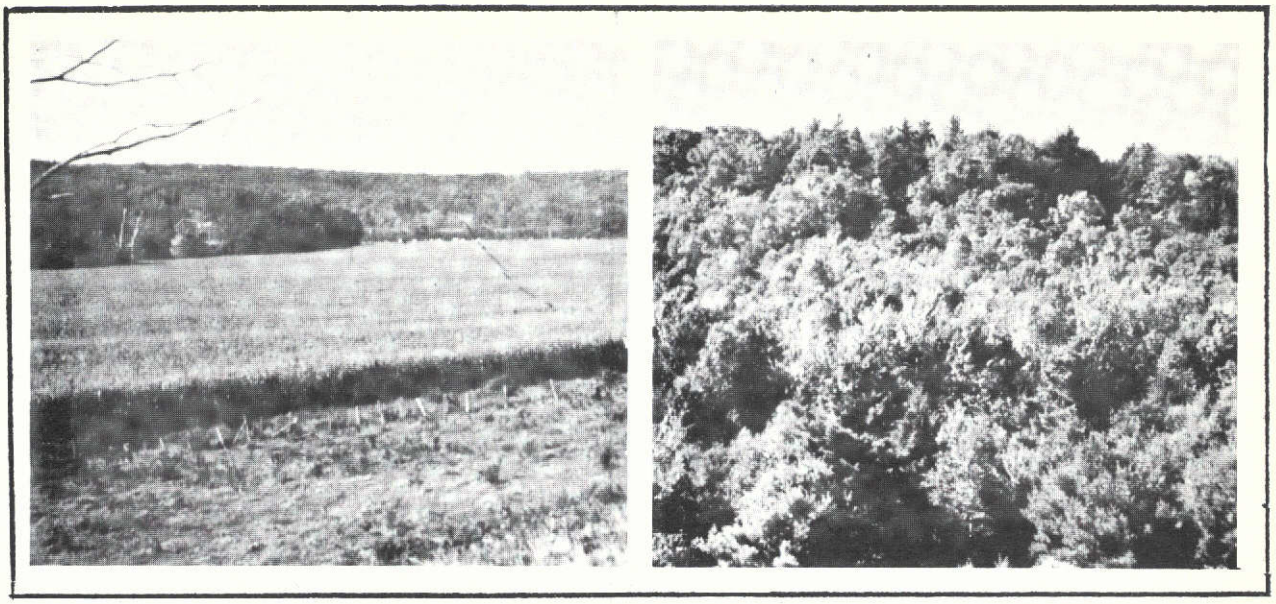


Figure 4a. Typical Appalachian Corridor (Vermont) ground observation sites: a) field crop and b) forest.

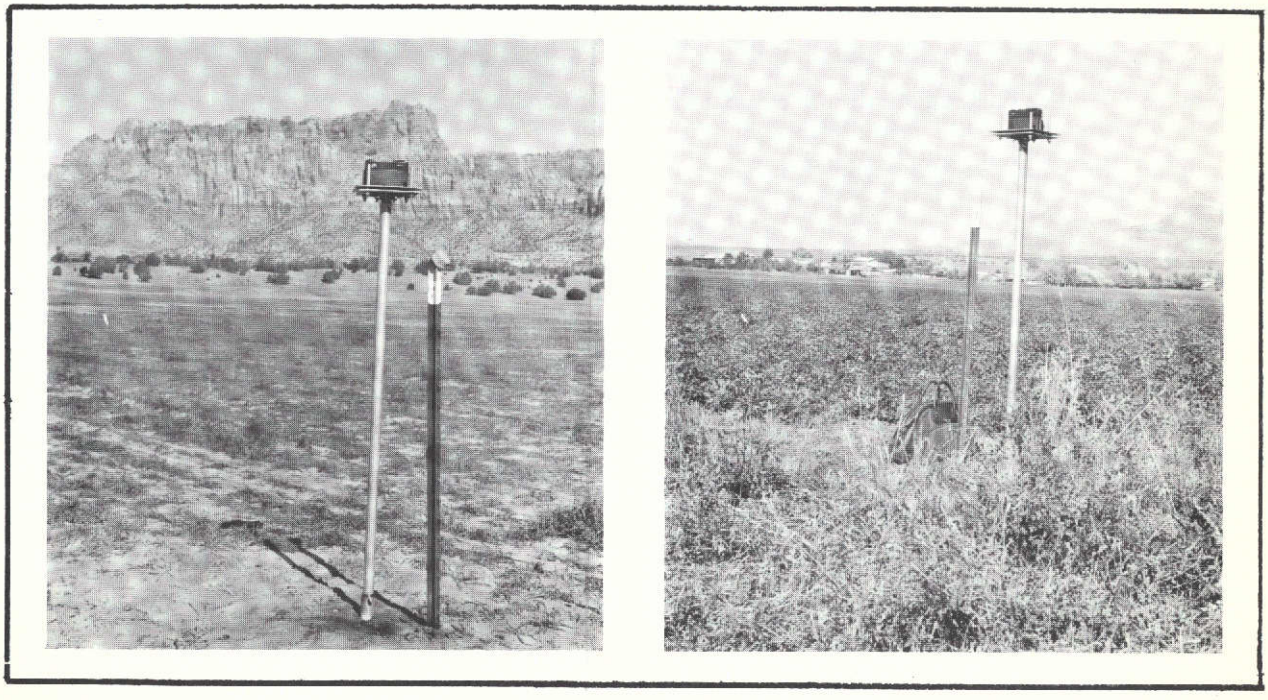


Figure 4b. Typical Rocky Mountain Corridor (Montana) ground observation sites: a) irrigated crop and b) prairie.



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### 2.1.1 Appalachian Corridor

This corridor extends from Bangor, Maine, westward to Burlington, Vermont, southwest to Morgantown, West Virginia, then south to Raleigh, North Carolina. Most of the corridor is through the Hill Country Habitat where topography is characterized by maturely dissected plains, low plateaus, foothills and old worn-down mountains. The northern one-third of the corridor has a humid microthermal climate while the remainder has a humid mesothermal climate.

The natural vegetation is shown in Figure 3. Seasonal changes in the spectral signatures of northern hardwoods and oak forests were observed and related to ground observations from the phenological networks.

Dairying and livestock rearing are important to this region, as are field crops (hay, alfalfa, corn, etc.), vegetable and fruit crops, and certain high value crops, i.e. grapes. Forest industries contribute greatly to the economy through the production of newsprint, naval stores, and the harvesting of timber.

### 2.1.2 Mississippi Valley Corridor

This corridor extends from Lansing, Michigan, south to central Indiana, southwest to eastern Oklahoma, then south to College Station, Texas. Most of the corridor is classified as Plains Habitat of the interior, alluvial, and glacial types. Like the Appalachian, the climate ranges from a humid mesothermal in the south to humid microthermal in the north.

The natural vegetation is shown in Figure 3. Seasonal changes in the spectral signatures of predominantly oak forests were observed and related to ground observations from the phenological networks.

Mixed agriculture predominates in this region with emphasis on corn, cereal grains, and livestock production.

### 2.1.3 Rocky Mountain Corridor

This corridor extends from northern Montana due south to northern Arizona. The region is classified primarily as a combination of Mountain Habitat and Plateau Habitat of the intermontane basin and tableland variety with a few lacustrine plains.

The climates of this corridor are very diverse. The northern section has a humid microthermal climate which changes to a mesothermal, warm dry summer climates of Utah, then back to a humid microthermal and eventually becomes a middle latitude steppe climate in Arizona.

The natural vegetation is shown in Figure 3.

Livestock production is the main agricultural enterprise in this corridor and farming is primarily devoted to the support of this industry.

### 2.1.4 Columbia Valley Corridor

This corridor extends from north central Montana due westward to south central Washington. It is classified a combination of Mountain Habitat and Plateau Habitat. The corridor has a microthermal, warm summer climate.

The natural vegetation is shown in Figure 3.

Livestock and grain production are the major agricultural activities in eastern and western sections of this corridor with some forest industries in the central section.

2.1.5 Location of Experimental Areas and Observation Sites

In the Appalachian and Mississippi Valley Corridors, ground-truth observation sites were located in a hardwood forest stand of at least ten acres in size. Agricultural land planted to crops was selected in close proximity to the site along with a major highway, river system or other natural or cultural feature which could be used to identify the site on the satellite imagery.

In the West, six experimental areas were chosen in the Rocky Mountain Corridor located in relatively flat terrain the elevation of all six areas were about 1450 m. The four experimental areas in the Columbia Valley Corridor were also located in relatively flat terrain. The elevation of all four areas was about 915 m. Each experimental area included the following three subsites:

1. A site which was typical of the surrounding non-irrigated rangeland. The predominate vegetative cover in the experimental area usually consisted of non-irrigated rangeland.
2. A site where a non-irrigated cultivated crop was grown (winter wheat at nine sites and barley at one site). This was normally a relatively small acreage surrounded by extensive non-irrigated rangeland.
3. A site where an irrigated perennial crop was grown (alfalfa at nine sites and grass meadow at one site). This was normally a relatively small acreage surrounded by extensive non-irrigated rangeland.

### 2.1.6 Phenological Data

Information was recorded throughout the East and West during 1972 and 1973 on the phenological changes of selected indicator plants used in the previously mentioned phenological networks.

"Red Rothomagensis" lilac (Syringa chenensis) is used as an indicator plant in the Central and Eastern United States and purple common lilac and two honeysuckle cultivars in the West.

### 2.1.7 Solar Thermal Units

Solar Thermal Units have been calculated by computer for locations in the world where both long-term solar radiation and temperature records are available. Solar Thermal Units (STU) for a given day are computed by multiplying mean daily temperature (°F) minus 31 by total solar radiation for that day ($cal/cm^2$)--the units, langley-degree-days. Average daily and accumulated values of STU for each day of the year have been determined for each station. From this information rough estimates of world-wide average patterns of phenological events are being constructed. World maps have been drawn for the Green Wave, the Brown Wave and the average date when the purple common lilac begins to bloom (Figs. 5a, 5b and 5c).

## 2.2 Data Handling

Computer programs were developed at Texas A & M University (Remote Sensing Center) and Purdue University (Laboratory for Applications of Remote Sensing) to process multispectral scanner measurements (MSS) of the Phenology Satellite Experiment test sites.

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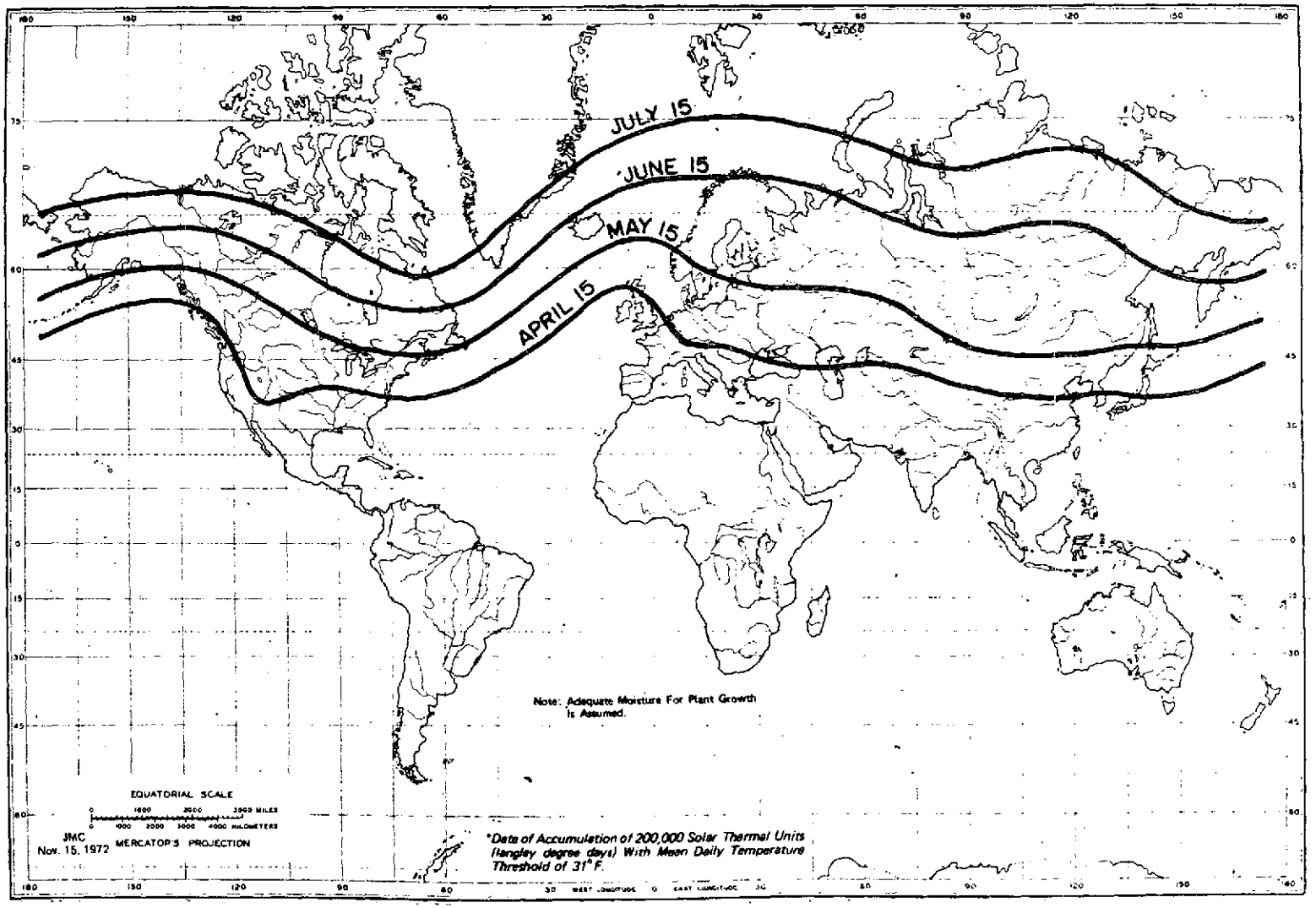



Figure 5a. Average date of Green Wave passage (after preliminary model).

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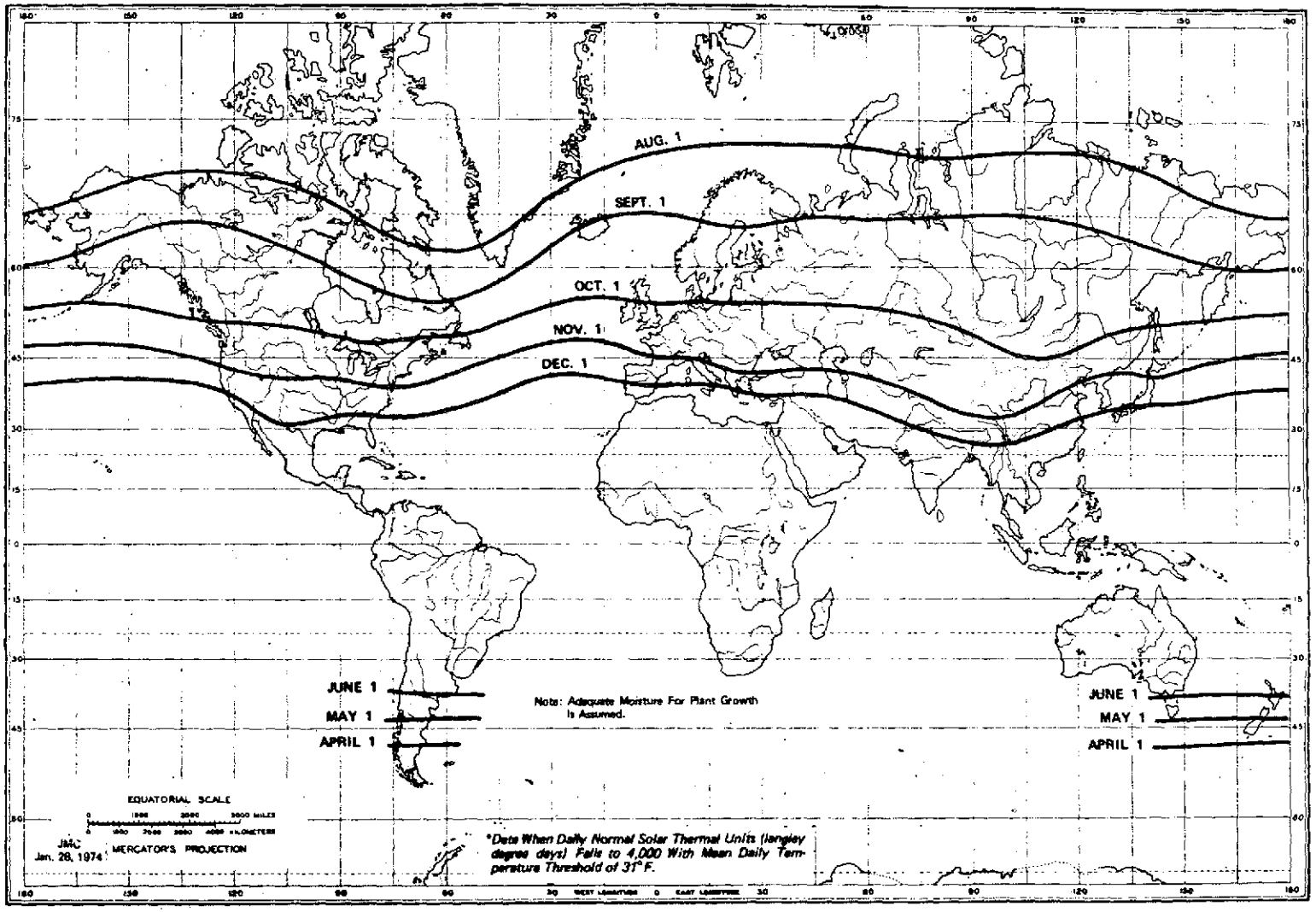



Figure 5b. Average date of Autumn Brown Wave passage (after preliminary model).

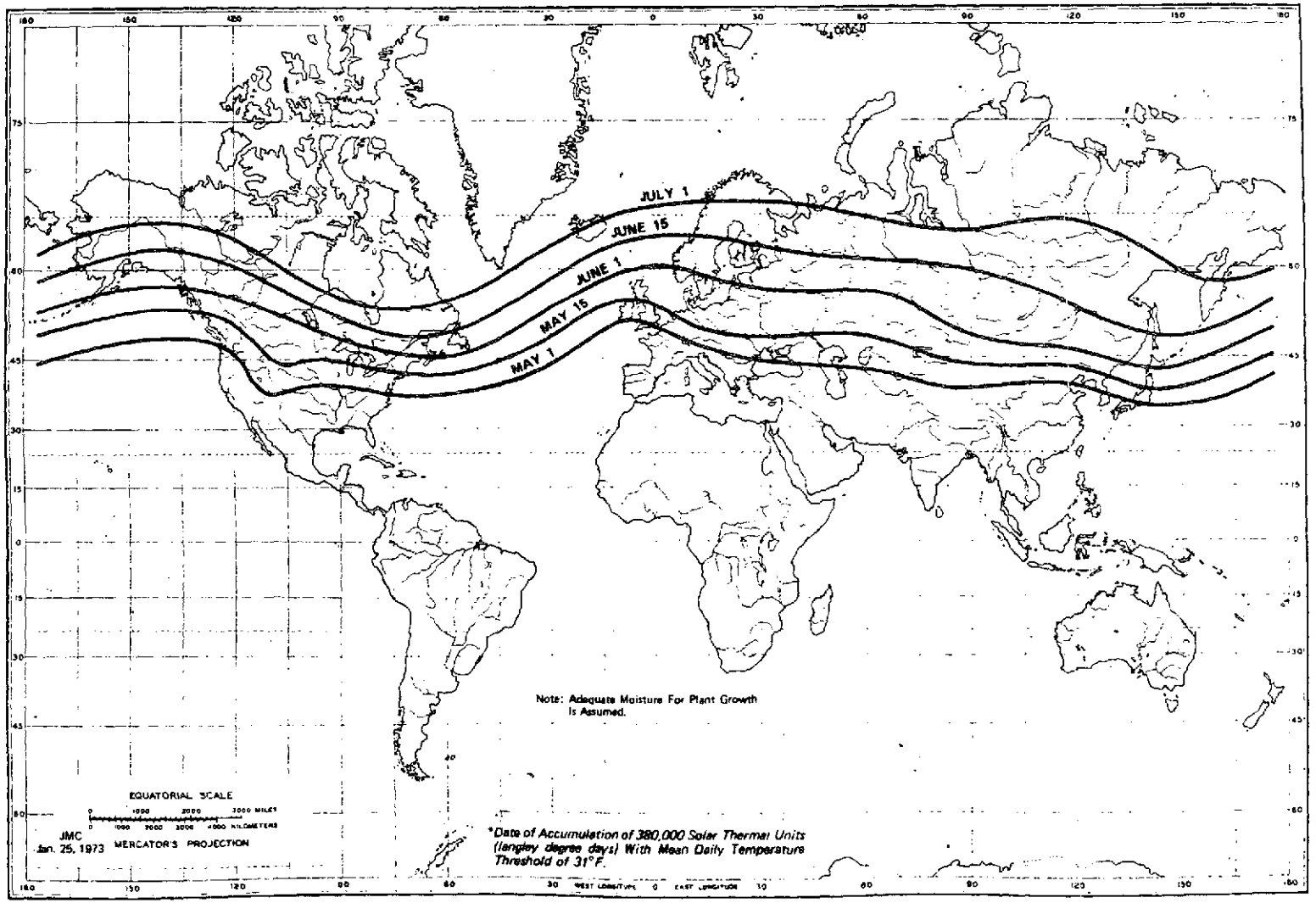



Figure 5c. Average date when Purple Common Lilac begins to bloom (after preliminary model).

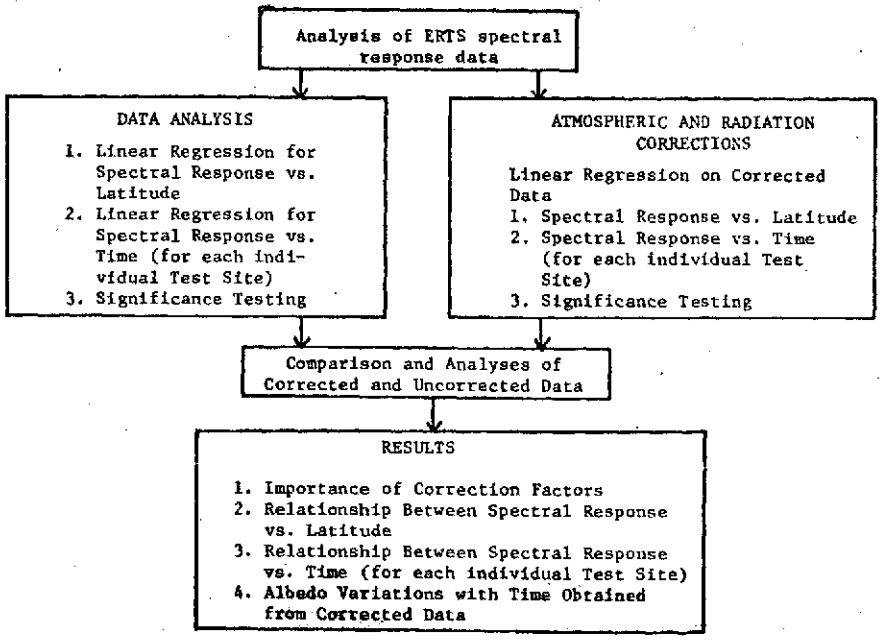
2.2.1 Qualitative Analysis of Individual Test Site Data

The objective of this activity was to prepare the ERTS-1 MSS data in a form facilitating analysis by the phenology network monitors. This required the development of a standard data product format and implementation of a data processing system insuring orderly data flow and reduction consistent with the product specifications.

Detailed data handling plans (Figs. 6 and 7) were formulated for the routing of the test site data received from the NASA Data Processing Facility (NDPF).

Appalachian and Mississippi Corridors

A flow chart illustrating the sequence of tests and correction factors used to infer the project results is illustrated below.



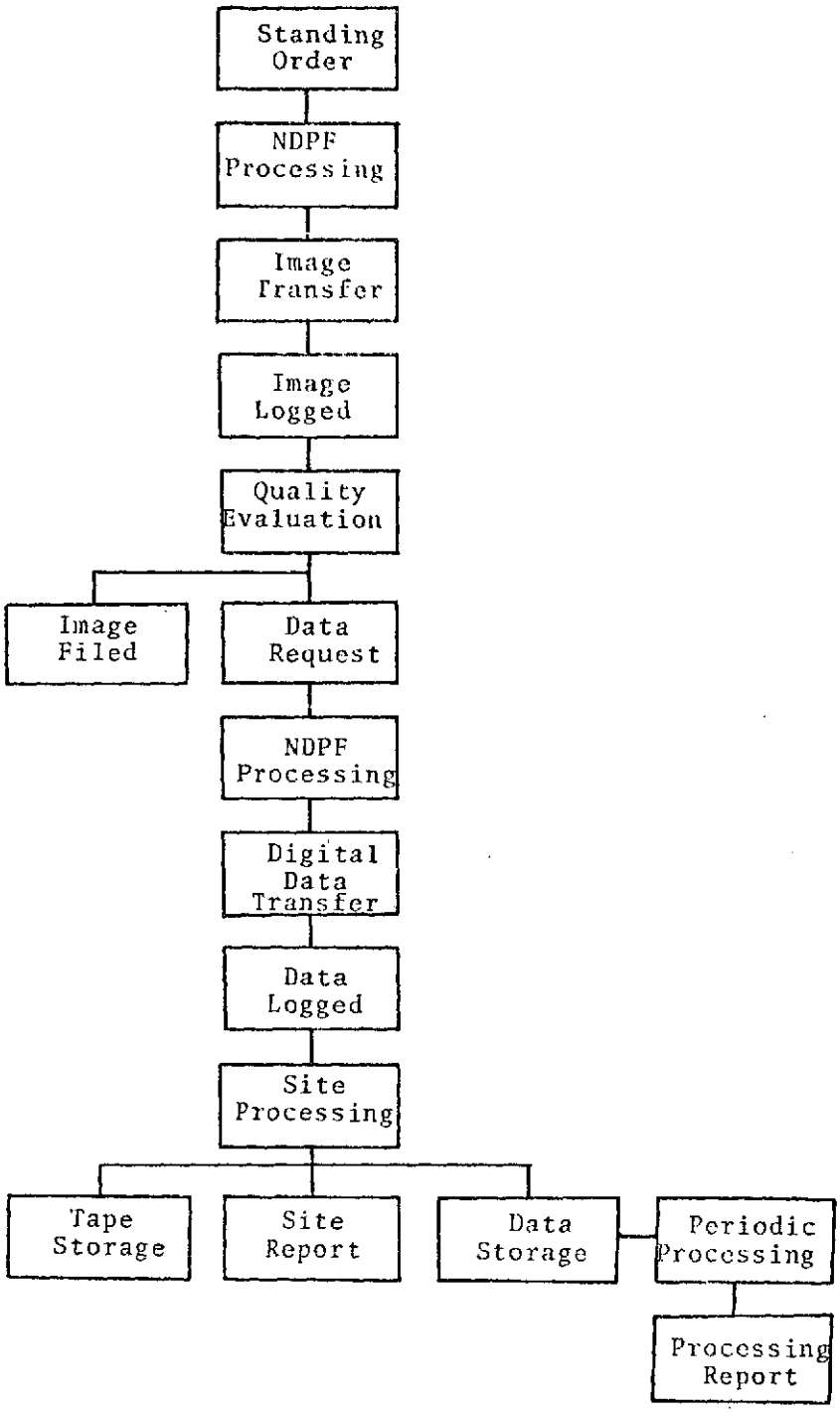



Figure 6. ERTS Data handling plan for the Western Corridors.

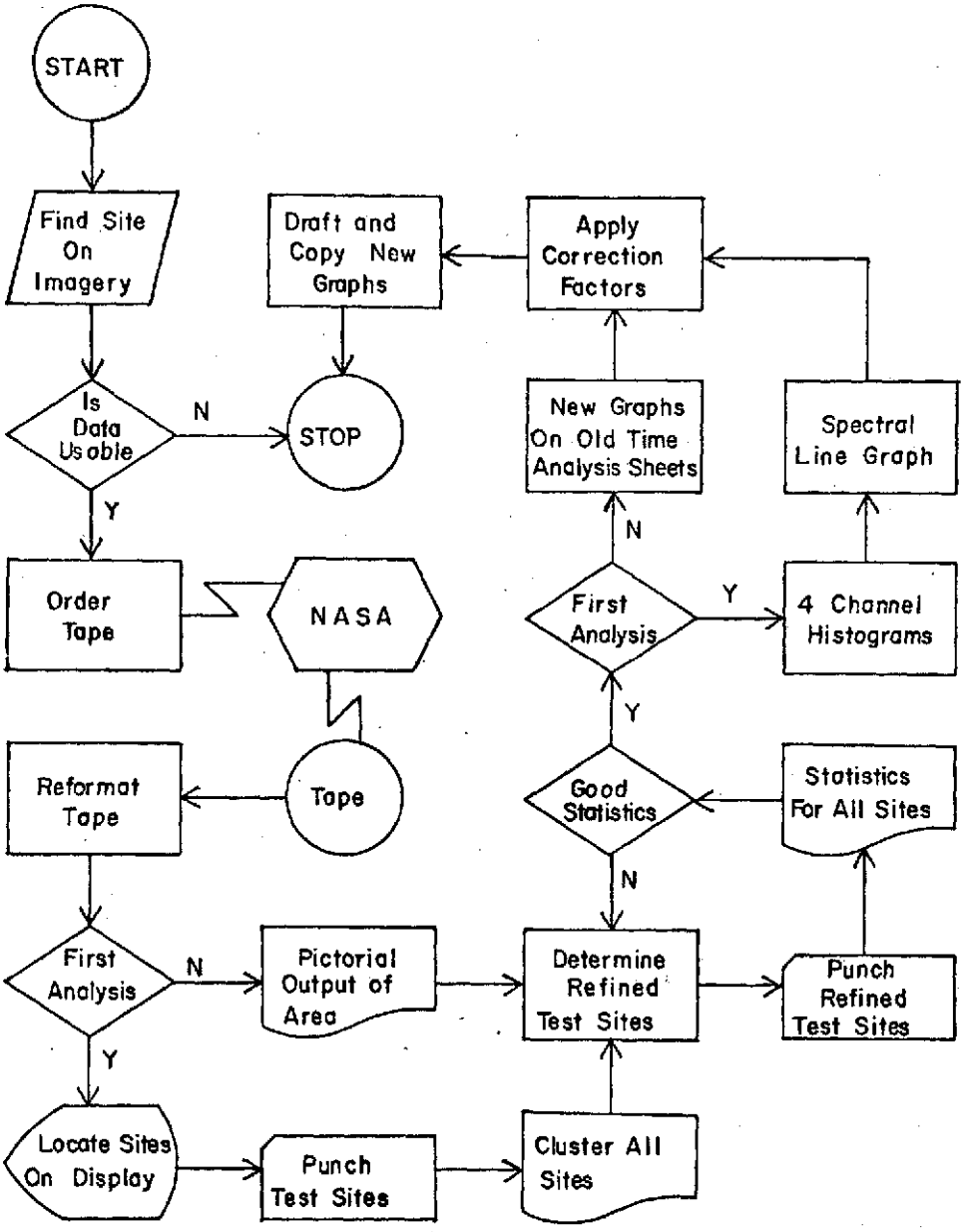



Figure 7. Data analysis procedure for the Eastern Corridors.

From August 1972 to November 1973, a total of 26 passes were completed over the two corridors. Twelve of the fourteen locations were so situated that they were scanned on the day following the main pass.

During this period of investigation, with optimum surface conditions, a total of 628 site evaluations was possible. Heavy cloud cover, especially in the early stages of the study, made possible a total of 229 images at the 14 locations. Of this number 146 tapes were ordered and 116 found satisfactory for evaluation. A breakdown of imagery data by years, brown and green wave, and by site location is provided in Table 1. Location by date of tapes analyzed are tabulated in Table 2.

Tapes requested and received from National Aeronautics & Space Administration (NASA) were first visually evaluated on the video display before reformatting. Those having bad data lines, haze or cloud shadows which give questionable results were not used. Usable imagery represented areas 40 x 40 km around the designated site location. Tapes of these specified areas were reformatted before analysis was initiated by the LARSYS software computer system. This technique provides a cluster analysis of each site between dates and is presented as a gray scale printout in a polyogram format of relative spectral response values for the specific site location. Relative spectral response is defined as a comparison value of the reflectance of the site location from date to date to the mean reflectance of adjacent areas around the site. Data showing relative reflectance for each site evaluation was given by locations on individual charts (Appendix E). On these charts the values of normalized data (corrected for solar elevation to 45° for bands 4-7) vary by date, and the character of the value differs. The horizontal axis of each value represents the maximum, mean or peak of

TABLE 1. Breakdown of Analysis According to Test Site
(East)

| | Number of Dates Analyzed | | | |
|---|---|---|---|---|
| | BW '72 | GW '73 | BW '73 | Total |
| APPALACHIAN CORRIDOR | | | | |
| 1. Orono, Maine | 1 | 3 | | 4 |
| 2. Richmond, Maine | 3 | 1 | | 4 |
| 3. Burlington Vermont* | 3 | 4 | 1 | 7 |
| 4. Ithaca, New York* | 3 | 2 | 2 | 8 |
| 5. State College, Pennsylvania | 1 | 4 | | 7 |
| 6. Morgantown, West Virginia* | 3 | 3 | 1 | 7 |
| 7. Raleigh, North Carolina | 6 | 4 | 1 | 11 |
| MISSISSIPPI CORRIDOR | | | | |
| 8. Lansing, Michigan | 1 | | | 1 |
| 9. Lafayette, Indiana* | 4 | 7 | 4 | 15 |
| 10. Southern Indiana* | 8 | 7 | 3 | 18 |
| 11. Jefferson City, Missouri* | 4 | 3 | 2 | 10 |
| 12. Barnsdall, Oklahoma* | 1 | 5 | 1 | 7 |
| 13. Commerce, Texas (North)* | | 4 | 2 | 6 |
| 14. College Station, Texas (Central)* | 3 | 7 | 2 | 13 |

*Curvilinear regressions performed for each individual site having 5 or more dates for analysis.

TABLE 2. List of Dates for Data Received

All Data According to Test Site - East

Appalachian and Mississippi Corridors

| Orono Maine | Richmond Maine | Burlington Vermont | Ithaca New York |
|---|---|---|---|
| 1 Sept. 1972 | 15 Aug. 1972 | 21 Sept. 1972 | 19 Aug. 1972 |
| 28 Feb. 1973 | 1 Sept. 1972 | 10 Oct. 1972 | 23 Sept. 1972 |
| 23 April 1973 | 8 Oct. 1972 | 27 Oct. 1972 | 11 Oct. 1972 |
| 22 July 1973 | 28 Feb. 1973 | 7 April 1973 | 2 June 1973 |
| | | 25 April 1973 | 8 July 1973 |
| | | 6 July 1973 | 6 Oct. 1973 |
| | | 24 July 1973 | 24 Oct. 1973 |
| | | 22 Oct. 1973 | |

| State College Pennsylvania | Morgantown West Virginia | Raleigh North Carolina | Lansing Michigan |
|---|---|---|---|
| 6 Sept. 1972 | 20 Aug. 1972 | 19 Aug. 1972 | 25 Aug. 1973 |
| 10 Jan. 1973 | 7 Sept. 1972 | 6 Sept. 1972 | |
| 23 March 1973 | 18 Nov. 1972 | 24 Sept. 1972 | |
| 16 May 1973 | 6 March 1973 | 11 Oct. 1972 | |
| 9 July 1973 | 24 March 1973 | 12 Oct. 1972 | |
| | 4 June 1973 | 30 Oct. 1972 | |
| | 2 Sept. 1973 | 23 March 1973 | |
| | | 10 April 1973 | |
| | | 16 May 1973 | |
| | | 2 June 1973 | |
| | | 6 Oct. 1973 | |

| Lafayette, Indiana | | Southern Indiana | |
|---|---|---|---|
| 30 Sept. 1972 | 4 May 1973 | 20 Aug. 1972 | 6 Nov. 1972 |
| 1 Oct. 1972 | 5 May 1973 | 12 Sept. 1972 | 16 Jan. 1973 |
| 19 Oct. 1972 | 9 June 1973 | 13 Sept. 1972 | 4 Feb. 1973 |
| 24 Nov. 1972 | 15 July 1973 | 30 Sept. 1972 | 22 Feb. 1973 |
| 17 Jan. 1973 | 16 July 1973 | 1 Oct. 1972 | 4 May 1973 |
| 4 Feb. 1973 | 21 Aug. 1973 | 19 Oct. 1972 | 9 June 1973 |
| | 7 Sept. 1973 | 5 Nov. 1972 | 16 July 1973 |
| | 15 Oct. 1973 | | 3 Aug. 1973 |
| | 18 Nov. 1973 | | 20 Aug. 1973 |
| | | | 21 Aug. 1973 |

| Jefferson City Missouri | Barnsdall Oklahoma | Commerce Texas (North) | College Station Texas (Central) |
|---|---|---|---|
| 11 Aug. 1972 | 13 Aug. 1972 | 16 March 1973 | 30 Aug. 1972 |
| 28 Aug. 1972 | 9 Feb. 1973 | 9 May 1973 | 23 Oct. 1972 |
| 29 Aug. 1972 | 19 March 1973 | 27 May 1973 | 16 Dec. 1972 |
| 8 Nov. 1972 | 22 April 1973 | 2 July 1973 | 3 Jan. 1973 |
| 14 March 1973 | 10 May 1973 | 7 Aug. 1973 | 16 March 1973 |
| 25 May 1973 | 3 July 1973 | 25 Aug. 1973 | 8 May 1973 |
| 18 July 1973 | 8 Aug. 1973 | | 9 May 1973 |
| 5 Aug. 1973 | | | 27 May 1973 |
| 17 Oct. 1973 | | | 2 July 1973 |
| | | | 19 July 1973 |
| | | | 24 Aug. 1973 |
| | | | 18 Oct. 1973 |

the cluster of the polygram. The vertical axis represents the variability of the data for each analysis, thus the longer the vertical line the less confident the statistics. Standard deviation, mean, and normalized mean values for this information are provided in the summary tables for each of the four channels (Appendix F).

A technique for comparing relationships of absorbed and reflected radiation, the band ratio parameter defined as BRP = $\frac{\text{Band 7 - Band 5}}{\text{Band 7 + Band 5}}$, has been developed from the normalized data of bands 5 and 7. These data have been plotted by dates for each of the 14 locations (Appendix G). The values of these ratios are also tabulated in the data tables and show positive values during the green wave of 1972 and 1973 and negative values for the Brown Wave (Appendix F).

Rocky Mountain and Columbia Valley Corridors

Imagery from 26 cycles of ERTS-1 have been received for all 10 test sites in the Rocky Mountain and Columbia River Valley Corridors. On hand are 216 sets of MSS images. Of these, 34 provided data resulting in the ordering of magnetic tapes.

A breakdown of imagery data by years, brown and green wave and location is provided in Table 3. Location by date of tapes analyzed is tabulated in Table 4.

Three subsites have been identified within each of the 10 test sites. These are (1) non-irrigated rangeland sites, (2) irrigated alfalfa fields, and (3) dryland wheat fields. At least one cycle of MSS data for each site has been computer-processed to extract radiance values for each subsite. It was a tedious task to accurately identify each of the three subsites. Numerous maps, aerial photographs, and positive transparencies of aerial photographs were required to accomplish this task.

TABLE 3. List of Dates for Data Received

All Data According to Test Site - West

## Rocky Mountain Corridor

| Browning Montana |
|---|
| 28 Aug. 1972 |
| 3 Oct. 1972 |
| 8 Nov. 1972 |
| 18 April 1973 |
| 11 June 1973 |
| 18 July 1973 |
| 4 Aug. 1973 |
| 10 Sept. 1973 |

| Logan Montana |
|---|
| 26 Aug. 1972 |
| 13 Sept. 1972 |
| 6 Nov. 1972 |
| 30 March 1973 |
| 9 June 1973 |
| 27 June 1973 |
| 28 June 1973 |
| 15 July 1973 |
| 16 July 1973 |
| 26 Sept. 1973 |
| 14 Oct. 1973 |

| Camas Idaho |
|---|
| 26 Aug. 1972 |
| 13 Sept. 1972 |
| 1 Oct. 1972 |
| 28 June 1973 |
| 16 July 1973 |
| 26 Sept. 1973 |
| 14 Oct. 1973 |

| Snowville Utah |
|---|
| 7 Aug. 1972 |
| 25 Aug. 1972 |
| 26 Aug. 1972 |
| 12 Sept. 1972 |
| 30 Sept. 1972 |
| 6 Nov. 1972 |
| 22 May 1973 |
| 9 June 1973 |
| 10 June 1973 |
| 16 July 1973 |
| 20 Aug. 1973 |
| 7 Sept. 1973 |
| 1 Nov. 1973 |

| Kanosh Utah |
|---|
| 7 Aug. 1972 |
| 25 Aug. 1972 |
| 12 Sept. 1972 |
| 30 Sept. 1972 |
| 15 April 1973 |
| 16 April 1973 |
| 4 May 1973 |
| 22 May 1973 |
| 8 June 1973 |
| 26 June 1973 |
| 27 June 1973 |
| 14 July 1973 |
| 15 July 1973 |
| 1 Aug. 1973 |
| 7 Sept. 1973 |

| Colorado City Arizona |
|---|
| 30 Sept. 1972 |
| 16 April 1973 |
| 22 May 1973 |
| 9 June 1973 |
| 15 July 1973 |
| 20 Aug. 1973 |
| 7 Sept. 1973 |

## Columbia Valley Corridor

| Havre Montana |
|---|
| 26 Aug. 1972 |
| 13 Sept. 1972 |
| 12 March 1973 |
| 29 March 1973 |
| 30 March 1973 |
| 5 May 1973 |
| 22 May 1973 |
| 23 May 1973 |
| 10 June 1973 |
| 27 June 1973 |
| 15 July 1973 |
| 16 July 1973 |
| 3 Aug. 1973 |

| Charlo Montana |
|---|
| 11 Aug. 1972 |
| 28 Aug. 1972 |
| 29 Aug. 1972 |
| 3 Oct. 1972 |
| 20 Jan. 1973 |
| 19 April 1973 |
| 18 July 1973 |
| 11 Sept. 1973 |

| Helmer Idaho |
|---|
| 11 Aug. 1972 |
| 12 Aug. 1972 |
| 30 Aug. 1972 |
| 5 Oct. 1972 |
| 26 Feb. 1973 |
| 27 May 1973 |
| 19 July 1973 |
| 12 Sept. 1973 |
| 18 Oct. 1973 |

| Bickleton Washington |
|---|
| 1 Sept. 1972 |
| 19 Sept. 1972 |
| 7 Oct. 1972 |
| 11 May 1973 |
| 29 May 1973 |
| 22 July 1973 |
| 9 Aug. 1973 |
| 27 Aug. 1973 |



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TABLE 4. Breakdown of Analysis According to Test Site
(West)

| | Number of Dates Analyzed | | | |
|---|---|---|---|---|
| | BW '72 | GW '73 | BW '73 | Total |
| ROCKY MOUNTAIN CORRIDOR | | | | |
| 1. Browning, Montana | 3 | 3 | 2 | 8 |
| 2. Logan, Montana | 3 | 6 | 2 | 11 |
| 3. Camas, Idaho | 3 | 2 | 2 | 7 |
| 4. Snowville, Utah | 6 | 4 | 3 | 13 |
| 5. Kanosh, Utah | 4 | 9 | 2 | 15 |
| 6. Colorado City, Arizona | 1 | 4 | 2 | 7 |
| COLUMBIA VALLEY CORRIDOR | | | | |
| 7. Havre, Montana | 2 | 10 | 1 | 13 |
| 8. Charlo, Montana | 4 | 3 | 1 | 8 |
| 9. Helmer, Idaho | 4 | 4 | 2 | 9 |
| 10. Bickleton, Washington | 3 | 3 | 2 | 8 |

Data processing was accomplished in several steps. The first of these steps was directed at locating the test site within the data tapes. Orbital parameter control of the satellite does not allow the site to be referenced directly by latitude and longitude with sufficient precision for processing. In order to precisely locate the test site, interactive manual interpretation was required. To accomplish this interpretation and still maintain the efficiency of the data system, data from an 18.5 km square, centered on the tape reference, computed from the orbital parameters and the site coordinates, was extracted from the digital tapes. These data were stored in high speed magnetic disc files for future reference, together with the header information from the tapes.

Illustrated in Figure 8 is the gray-scale density printout display of selected MSS bands on a computer line printer for manual interpretation. Using this technique, radiance intensity levels are related to printer letters which have been chosen specifically for their differing ink densities. Printing lines of the density selected letters corresponding to image element intensities along a scan presents an image representation which is directly related to the tape records. Key landmarks in the proximity of the site can be observed from this gray-scale map and their exact tape coordinates related to their terrain coordinates. This information was provided to the next step of processing which could then exactly locate the test site with reference to the landmarks. This processing step was implemented on an IBM 360/65 digital computer.

In the second step of site processing, the tape and terrain coordinates determined from the interpretation of the displayed data were used to determine the tape coordinates of the test site to be processed. The landmark

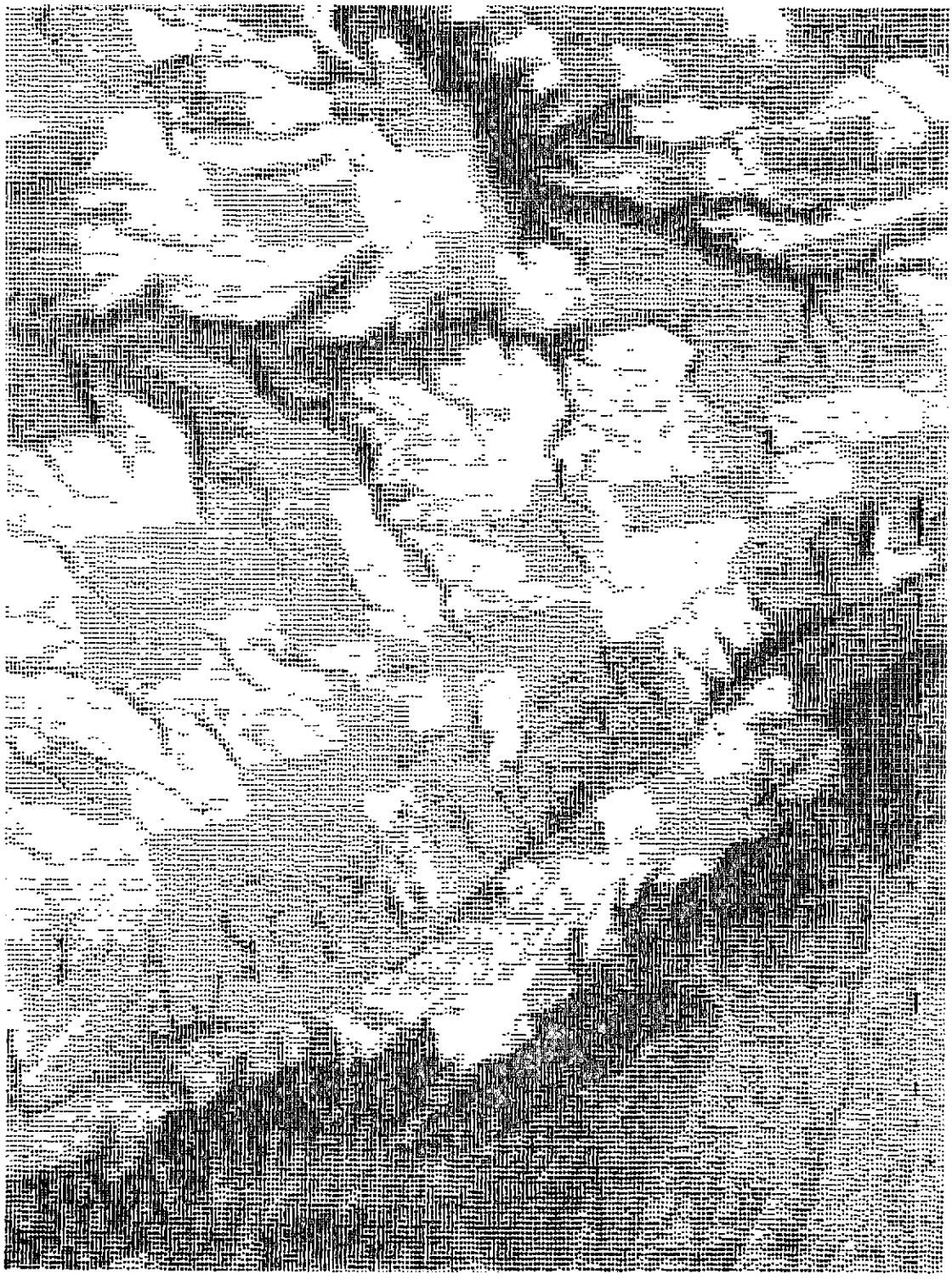


Figure 8. Columbia Valley test site image, Bickleton, Washington (1040-18204).

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references were also cataloged with the data set for future reference. The data were read from the high speed disc and the site data extracted according to the previously determined tape coordinates. The data from specified subsite areas were processed and the subsite spectral signature means and covariances were determined. This information was utilized to calculate the phenological indicator parameter for each subsite and this was inserted into the computerized site data catalog.

A standard format report (Figs. 9-11) is provided at the completion of site processing. Data presented (Appendix H) is corrected for sun intensity variation due to sun elevation at the time of the imagery (see section 2.2.2). Included in the report is the site designator, which shows the corridor, site, and subsite designation. For example, "CV7" designates site 7 in the Columbia Valley Corridor. Subsites have been disignated as "A" Alfalfa, "W" Wheat, and "R" Range (Fig. 9-11). Additional information in the report heading includes the NASA image identifier 1304-17461, and the date of the satellite overpass 23May73. Other data includes the data cell and line extents of the site and the total number of points in the full site. Subsite band means and covariances are tabulated and a graph of the mean values is printed. Data points are indicated by the symbol "*" and interconnecting plot lines by the symbol "-". Also included is a printout of two calculated data parameters, the band ratio parameter defined as $BRP = \frac{\text{Band 7 - Band 5}}{\text{Band 7 + Band 5}}$ and the transformed vegetation parameter, $TVP = (BRP + 0.5)^{1/2}$. These reports show the results of integrating the reflectance values from scenes which were located (scan line and cell) by use of a Band 5 gray map (Fig. 12) and a topographical map of the general area. The gray map coordinates were provided by Montana State

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1034-17452
DATE ACQUIRED: 26AUG72

CELLS 2449 TO 2452
LINES 1383 TO 1385
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

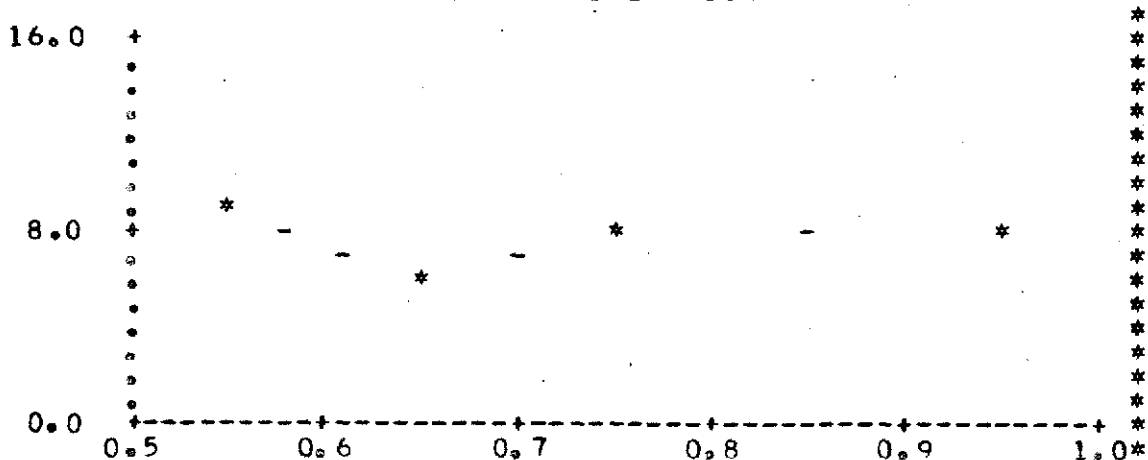
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.91 | 0.38 | .5 - .6 |
| BAND 5 | 5.91 | 0.48 | .6 - .7 |
| BAND 6 | 8.45 | 0.65 | .7 - .8 |
| BAND 7 | 7.93 | 0.58 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.745 | -0.447 | -0.299 |
| BAND 5 | 0.745 | 1.000 | -0.569 | -0.459 |
| BAND 6 | -0.447 | -0.569 | 1.000 | 0.932 |
| BAND 7 | -0.299 | -0.459 | 0.932 | 1.000 |

BAND RATIO PARAMETER 0.146
TRANSFORMED PARAMETER 0.804




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

Figure 9. Standard Report for Havre, MT (CV 7) Alfalfa subsite, 23 May 1973.

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1034-17452
DATE ACQUIRED: 26AUG72

CELLS 2435 TO 2438
LINES 1386 TO 1392
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

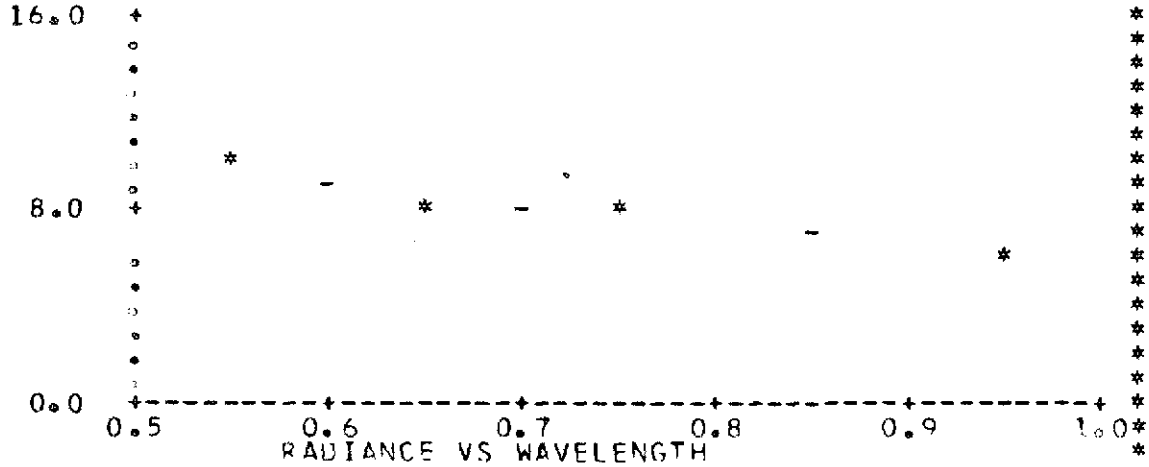
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.09 | 0.48 | .5 - .6 |
| BAND 5 | 7.90 | 0.55 | .6 - .7 |
| BAND 6 | 7.81 | 0.57 | .7 - .8 |
| BAND 7 | 6.48 | 0.36 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.647 | 0.546 | 0.631 |
| BAND 5 | 0.647 | 1.000 | 0.404 | 0.537 |
| BAND 6 | 0.546 | 0.404 | 1.000 | 0.601 |
| BAND 7 | 0.631 | 0.537 | 0.601 | 1.000 |

BAND RATIO PARAMETER -0.099
TRANSFORMED PARAMETER 0.633




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

Figure 10. Standard Report for Havre, MT (CV 7) Wheat subsite, 23 May 1973.

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1034-17452
DATE ACQUIRED: 26AUG72

CELLS 2457 TO 2464
LINES 1428 TO 1438
TOTAL POINTS 88

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

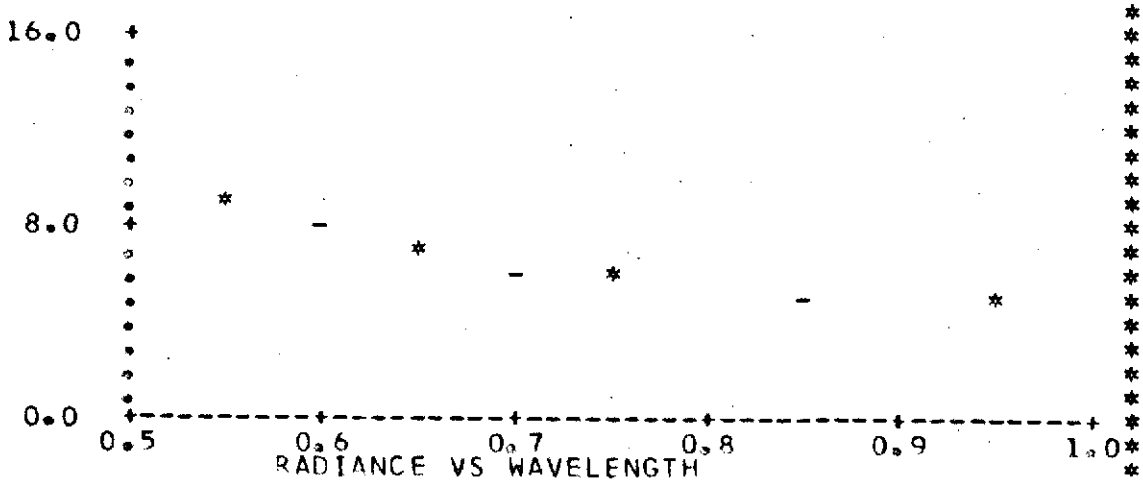
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.01 | 0.50 | .5 - .6 |
| BAND 5 | 6.64 | 0.44 | .6 - .7 |
| BAND 6 | 6.34 | 0.35 | .7 - .8 |
| BAND 7 | 5.31 | 0.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.772 | 0.098 | 0.128 |
| BAND 5 | 0.772 | 1.000 | 0.119 | 0.038 |
| BAND 6 | 0.098 | 0.119 | 1.000 | 0.683 |
| BAND 7 | 0.128 | 0.038 | 0.683 | 1.000 |

BAND RATIO PARAMETER -0.111
TRANSFORMED PARAMETER 0.624




PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

Figure 11. Standard Report for Havre, MT (CV 7) Range subsite, 23 May 1973.



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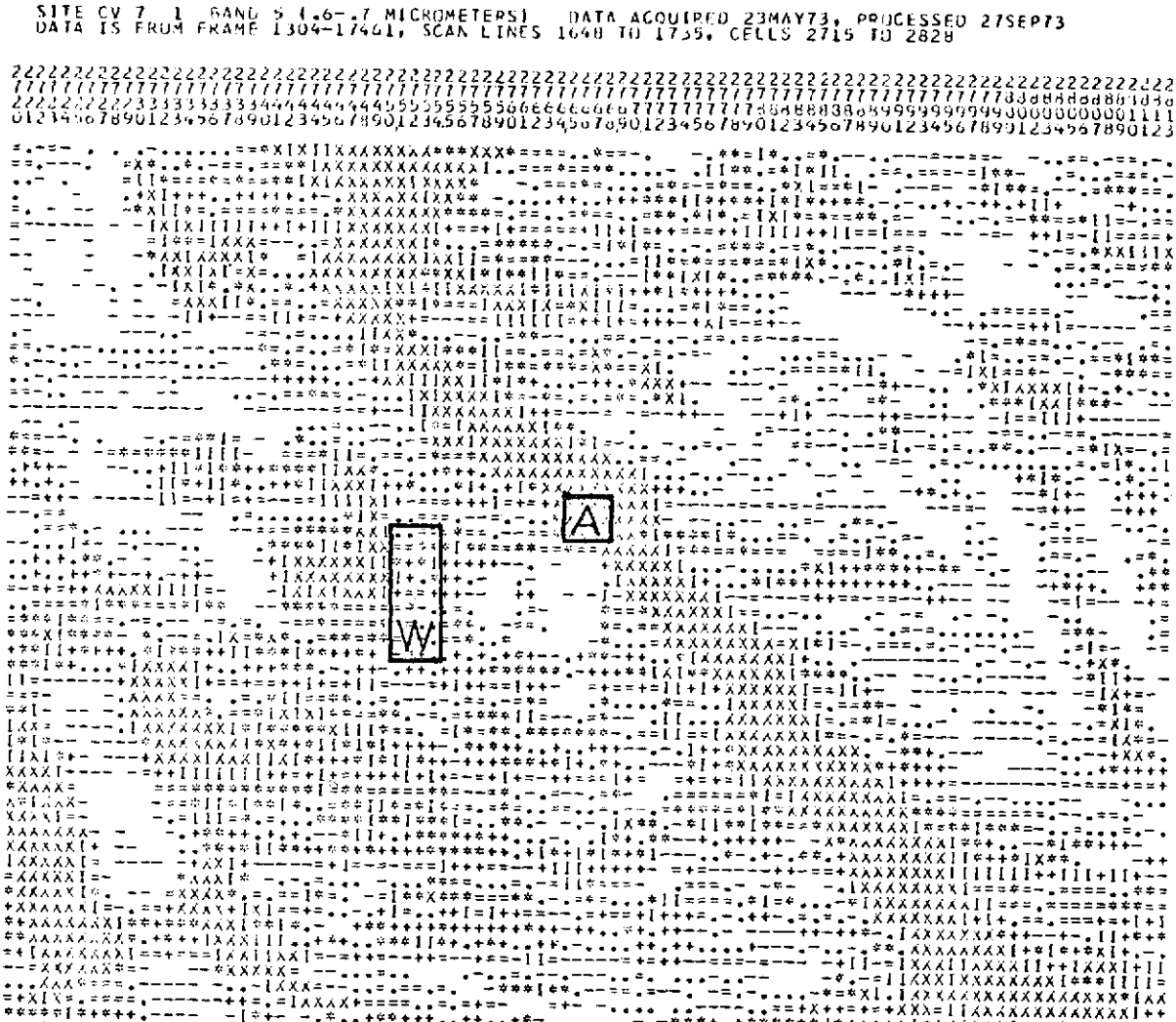



Figure 12. Band 5 gray map for Havre, MT, 23 May 1973.



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University, and were verified by them upon receipt of the site reports.

An option in the programming has also been included to allow mean and covariance calculations to be made and printed for 4 mile square sites including all subsites in essentially the same format as the full subsite report. This provides an integrated measure of the composite vegetation development.

Data showing radiance and relative spectral response (bands 4-7) for each site evaluation is given on individual charts (Appendix I). The variability of the data points (Δ) for each analysis is indicated by the symbol "-" above and below the data points.

The values of the BRP for each site are graphed in a similar manner (Appendix J).

2.2.2 Radiation and Atmospheric Correction Factors

The problem of changing atmospheric and illumination conditions has been recognized since the beginning of the ERTS project. These changing conditions generally affect the absolute variations of the spectral signatures recorded from different times and locations, and will in general have some unspecified effect on the results derived from these signatures. It is, therefore, necessary to correct the data for variations in solar elevation and atmospheric transmissivity before a meaningful comparison can be made.

Research on this problem was conducted both by LARS, Purdue University and RSC, Texas A & M University (Appendix K).

2.2.3 Photo Interpretation

United States Geological Survey maps (1:250,000), Agricultural Stabilization and Conservation Service (ASCS) maps (1:60,000 and 1:20,000) as well as ASCS aerial photographs were obtained for the areas of the ground observation sites. All the sites were located and recorded. This method insured the accurate delineation of site boundaries on 9 x 9 MSS transparencies. Establishing the locations of experimental sites on these transparencies is necessary before proceeding with photo-interpretation and the analysis of digital printouts.

Color composite transparencies were prepared from 9 x 9 black and white MSS positive transparencies.

Photo-interpretation methods (Appendix L) were used to construct time lapse sequences (Fig. 13-16). A similar type of sequence was collated using ground photography and forest cover measurements obtained from a Digicol Model 4010-30 density slicer. The Digicol has a planimeter attachment which is used to record the percent area of different density levels (example, sky versus foliage) within a photo. The changing percentages between sets of photography of the same scene over different dates reflect progressive foliage development or recession and represent a time lapse sequence of phenological change.

Visual estimates were also obtained using the standardized ground photographs. Panels of seven to nine individuals observed slide projections on a screen and each person estimated the percent of ground covered with green foliage at the western sites. As an aid in this effort, a detailed survey (Appendix M) was made at each of the range sites in the Rocky Mountain and Columbia Valley corridors to determine the approximate species composition based on vegetative cover.

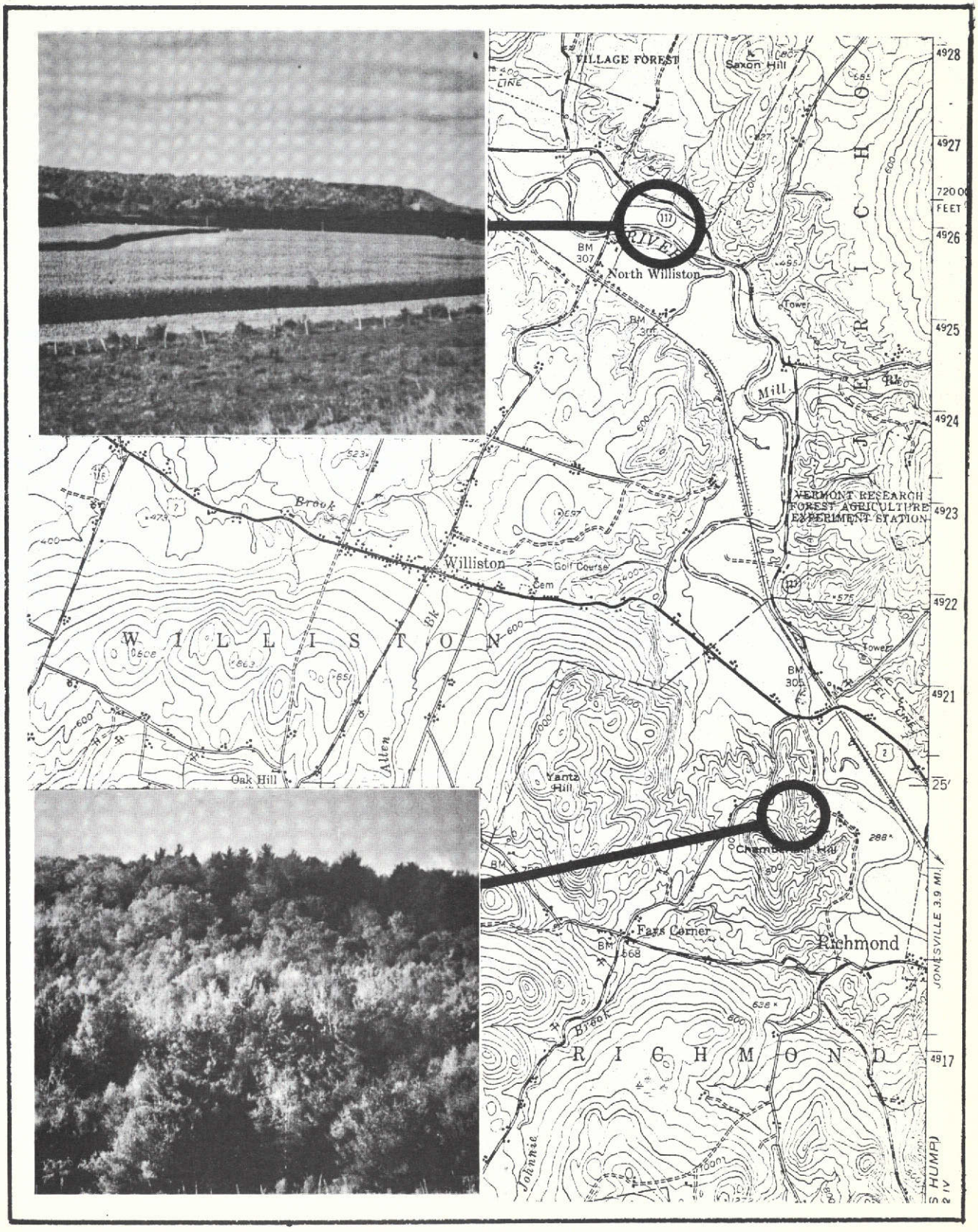



Figure 13. Northeast quarter of Burlington quadrangle showing cornfield and forest site (scale 1:62500).

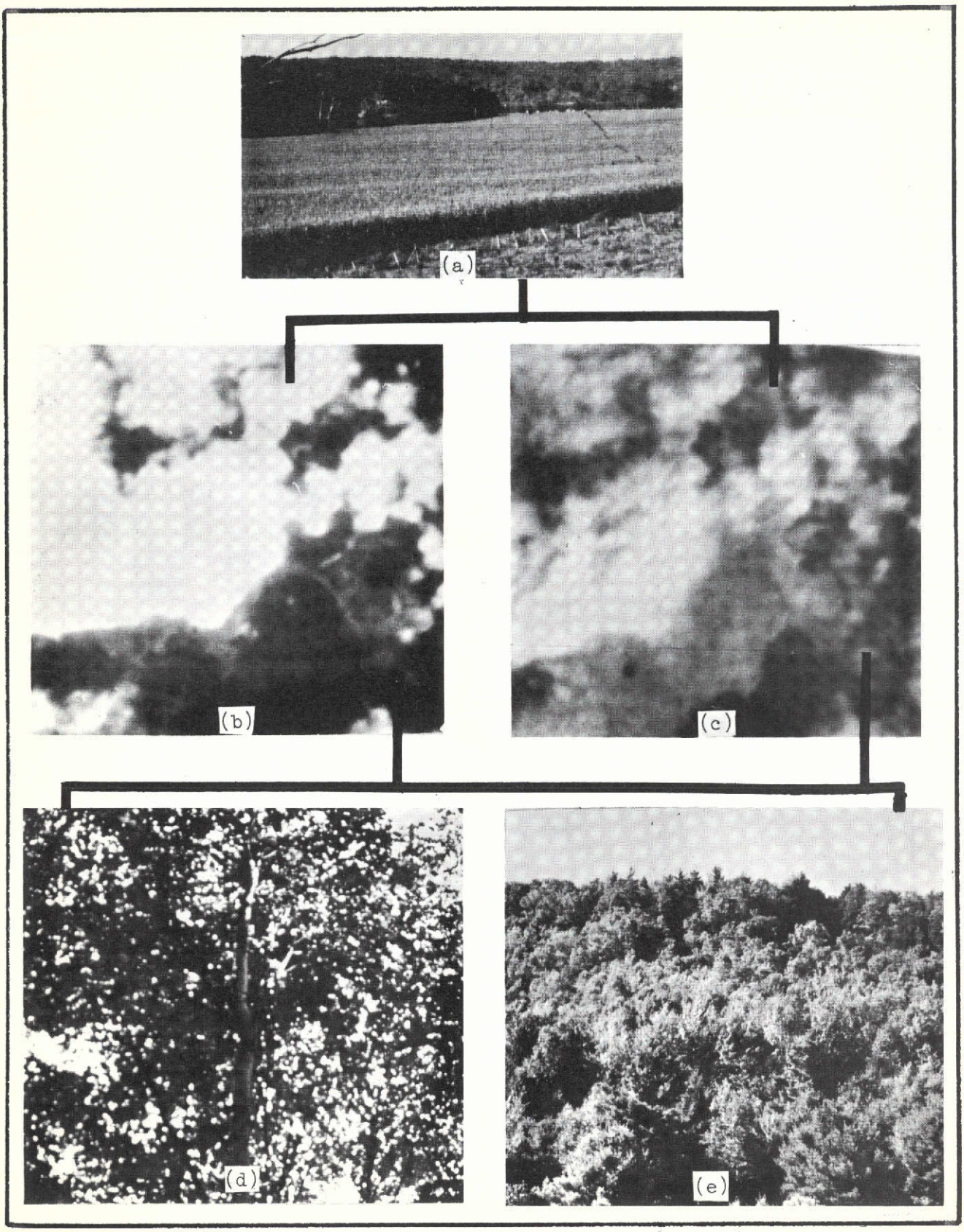



Figure 14. Ground observation photography and ERTS-1 imagery showing stages of vegetational development on 22 Sept 1972 at the Vermont Test Site: a) mature standing corn, b) MSS Band 5 (scale 1:125000), c) MSS Band 7 (scale 1:125000), d) forest canopy, and e) forest site.

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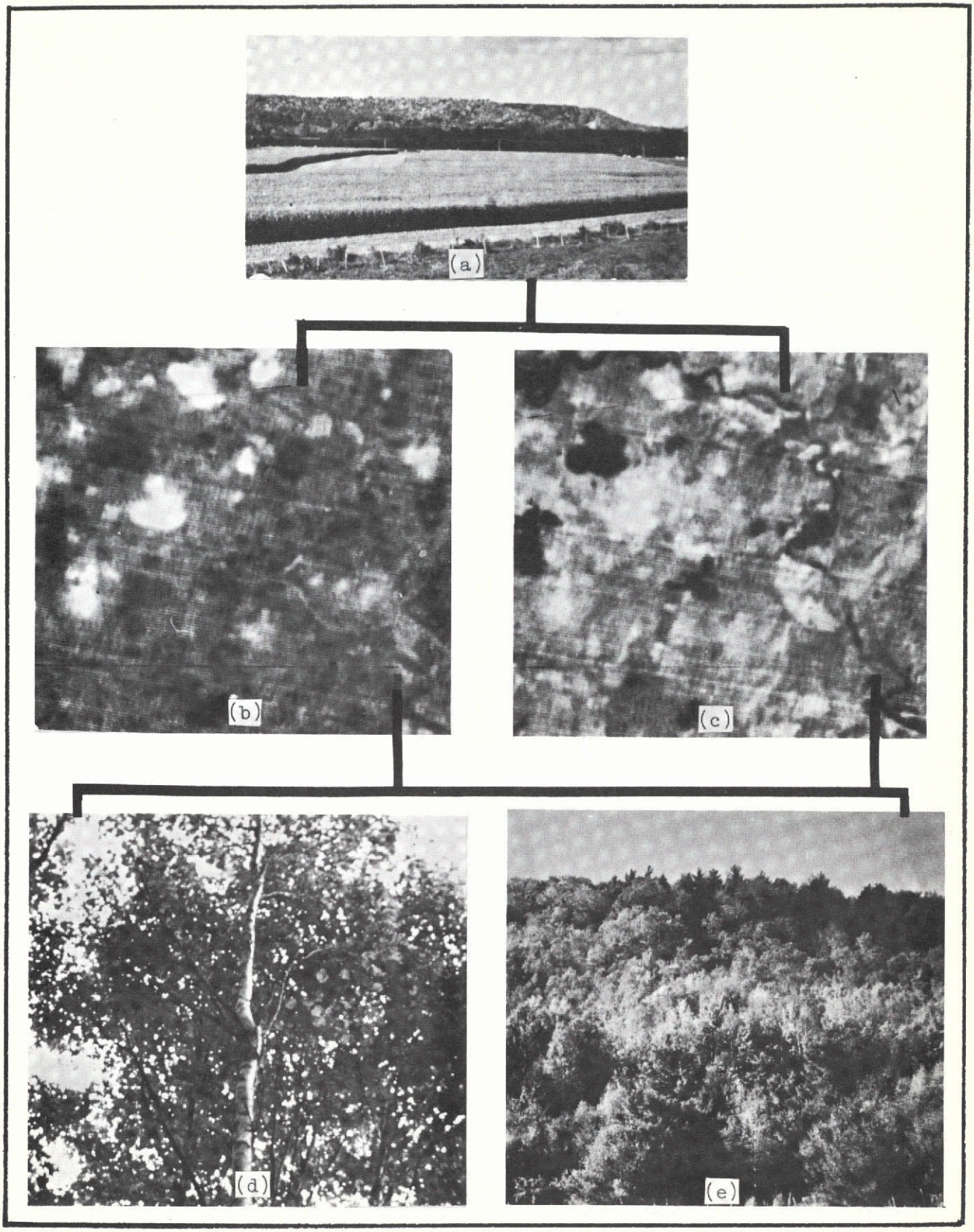



**Figure 15.** Ground observation photography and ERTS-1 imagery showing stages of vegetational development on 10 Oct 1972 at the Vermont Test Site: a) partially harvested corn, b) MSS Band 5 (scale 1:125000), c) MSS Band 7 (scale 1:125000), d) forest canopy, and e) forest site.

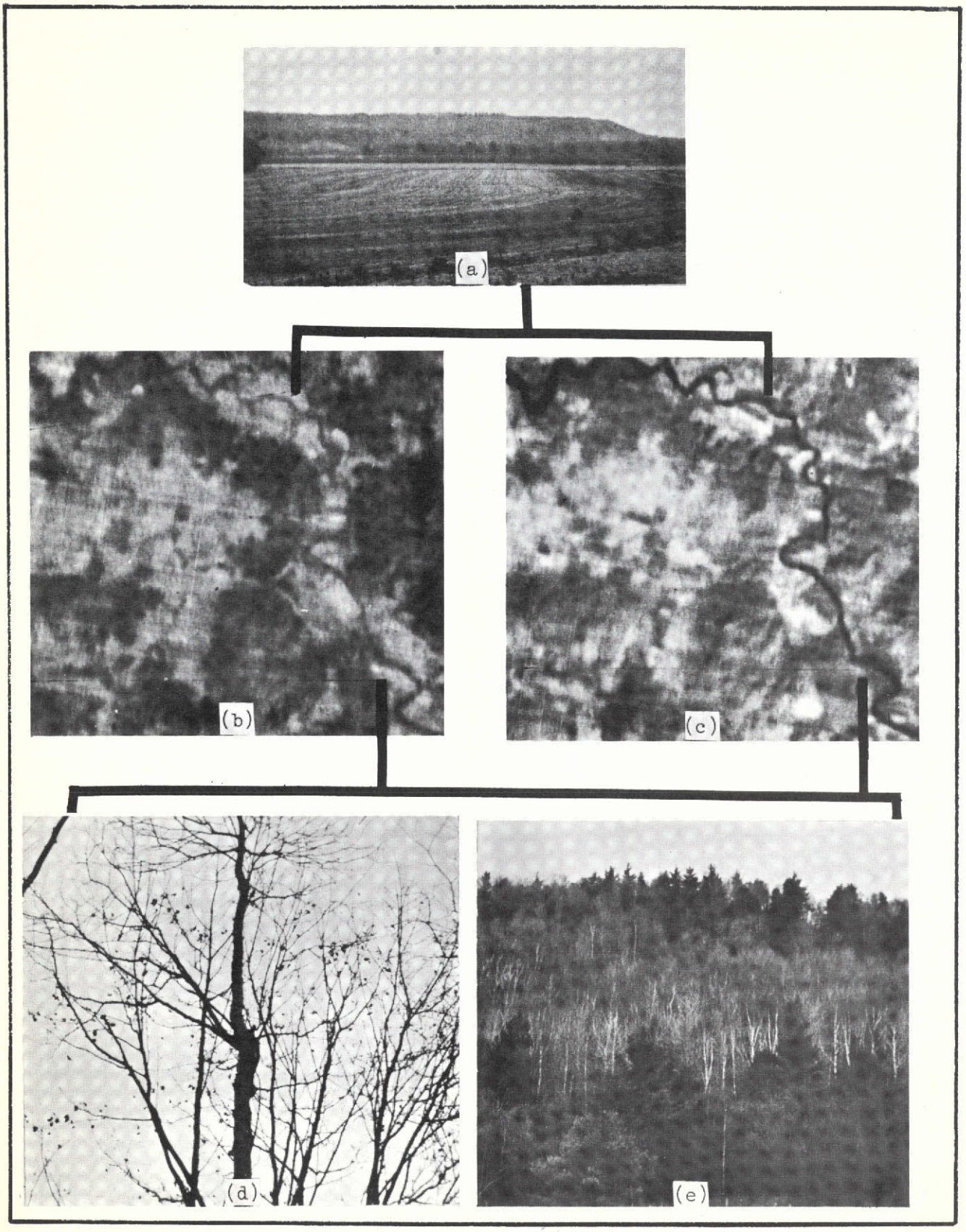



Figure 16. Ground observation photography (4 Nov 1972) and ERTS-1 imagery (27 Oct 1972) showing stage of vegetational development at the Vermont Test Site: a) corn stubble, b) MSS Band 5 (scale 1:125000), c) MSS Band 7 (scale 1:125000), d) forest canopy, and e) forest site.

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The panel (eight individuals) observing slides of the eastern forested sites were shown a slide with no leaves present (zero percent green) and one with a full canopy (100 percent green). With these two slides showing for reference, a third was projected on a screen and the panel was asked to estimate the percent of leaves present. In addition, when viewing the full sequence of slides, they estimated the percent of green leaves present.

The most suitable series of photographs were used at each site, and in each case the same photographic scene at each was viewed throughout the entire panel sitting.

The slides of the western sites were taken from a height of four feet above the ground at an angle of 30 degrees down from the horizontal. Estimates of percent green were not modified to adjust for possible bias related to the fact that photographs were not taken perpendicularly to the ground. The slides of the eastern sites were taken from a position that gave a panoramic view of the forest.

The lowest and highest estimate was dropped and a mean was computed from the remaining estimates. A standard deviation was also computed from the same estimates which were used in the calculation of the means.

### 2.2.4 Color Reconstitution Techniques

As an aid to analyzing the data and for a better visual representation of the area under study, a photographic technique developed by the Laboratory for Applications of Remote Sensing (LARS) at Purdue University was employed for at least one good set of data for each of the 24 sites to produce color images similar to color infrared photographs. The process, referred to as color enhancement, uses a sequence of color filters for

simultaneous exposures utilizing bands 4, 5, and 6 of the ERTS-1 data. The color images show the forested areas very distinctly and in many cases make it easier to locate such regions. The technique was also quite useful in locating wheat fields in the winter data since wheat and grass are about the only areas expected to be green (showing up bright red on the false color images) at this time of year.

## 3.0 RESULTS

### 3.1 Identification of Green and Brown Waves

Two different methods were utilized to investigate the relationship between data obtained via ERTS-1 and ground observations on the passage of the Green and Brown Waves. One method utilized the tape product and computer analysis and the other involved the use of densitometry and nine inch MSS transparencies.

#### 3.1.1 Computer Method

A number of equations were developed in an effort to relate ground observations to Satellite MSS data. Of the several criteria (ground observed parameters) available for use in developing or evaluating algorithms the "percent green" for all foliage was chosen. This relates to the overall progress of the Green or Brown Waves and can be used on an individual crop basis or on a more general basis which includes all plant species at the test sites.

Although other algorithms were developed, the equations relating BRP (section 2.2.1) to "percent green" were chosen for further study. The equations are listed in Table 5. The BRP indicates the passage of the Green or Brown Wave over all foliage in the test sites with a good to fair degree of correlation between satellite data and ground observations. In the case of the mixed deciduous forest in the two Eastern Corridors the BRP was a good indicator of amount of green canopy during the Green Wave in the spring and a fair indicator of percent of leaf fall and leaf coloration during the Brown Wave.

TABLE 5. Regression Equations Relating Band Ratio Parameter (BRP) to Vegetation (G = percent green in spring; LF = percent leaves on trees; LC equals percent green of total leaves in fall).

| Equations | Vegetation | N | $R^2$ | Equation Code |
|---|---|---|---|---|
| G = 197.3 BRP + 33.8 | Forest | 25 | .87 | G-F-BRP |
| G = 112.8 BRP + 28.8 | Alfalfa | 39 | .48 | G-A-BRP |
| G = 119.0 BRP + 26.8 | Wheat | 47 | .36 | G-W-BRP |
| G = 66.5 BRP + 17.6 | Range | 35 | .67 | G-R-BRP |
| LF = 135.6 BRP + 60.5 | Forest | 21 | .63 | LF-BRP |
| LC = 136.0 BRP + 38.8 | Forest | 21 | .63 | LC-BRP |

Figure 17 shows the relation between BRP and the ground observed parameters G, LF and LC (Table 5). While one equation would closely approximate the equations for wheat and alfalfa, different equations are needed for the prediction of the ground observed parameters for the eastern forests and the rangeland in the western United States. Visual field observations determined that the time of greening in the spring corresponds to the time that about 10 percent of the ground is covered with green foliage and about 10 percent of the forest canopy is present. Solving the equation for the BRP with G = 10% gives values of -0.120 for forests, -0.114 for range, -0.141 for wheat and -0.161 for alfalfa at the time of the Green Wave occurrence.

As expected, alfalfa and wheat will turn green slightly earlier than the eastern forests and all three will indicate the Green Wave passage before the sparse open rangeland.

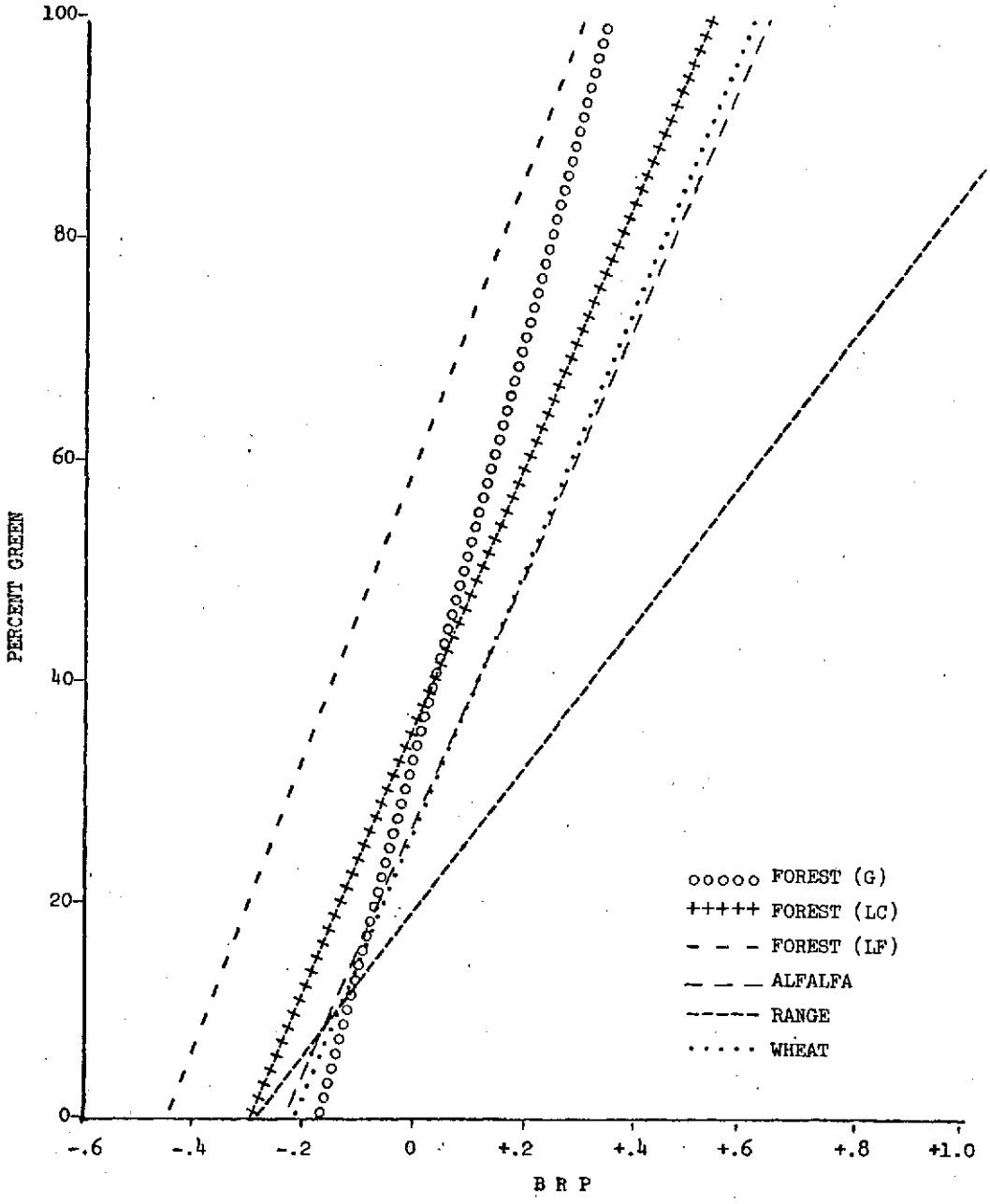



Figure 17. Relationship of BRP to percent green leaf fall and leaf color.

In an effort to make the determination of percent of canopy closure (percent green) in the spring, the loss of canopy, and percent of coloration in the fall more objective, a Digicol Model 4010-30 density slicer was utilized as discussed previously on page 34.

Due to the problem of differentiation between sunlight, tree trunks, branches and certain types of clouds, the use of the density slicer did not result in an improvement as indicated by the $R^2$ values (Table 6).

TABLE 6. Regression equations developed for Forested sites.

| Equations | N | $R^2$ |
|---|---|---|
| $G = 197.3\ BRP + 33.8$ | 25 | .87 |
| $G_D = 205.3\ BRP + 44.4$ | 18 | .77 |
| $LF = 135.6\ BRP + 60.5$ | 21 | .63 |
| $LF_D = 178.8\ BRP + 41.8$ | 21 | .41 |
| $LC = 136.0\ BRP + 38.8$ | 21 | .63 |
| $LC_D = 179.7\ BRP + 11.6$ | 21 | .36 |

Subscript D indicates equation obtained utilizing density slicer measurement. No subscript indicates equation obtained utilizing visual estimate.

Figure 18 shows the plot of the equations generated for the same phenological events for deciduous forest vegetation utilizing the visual estimate and the measured density.

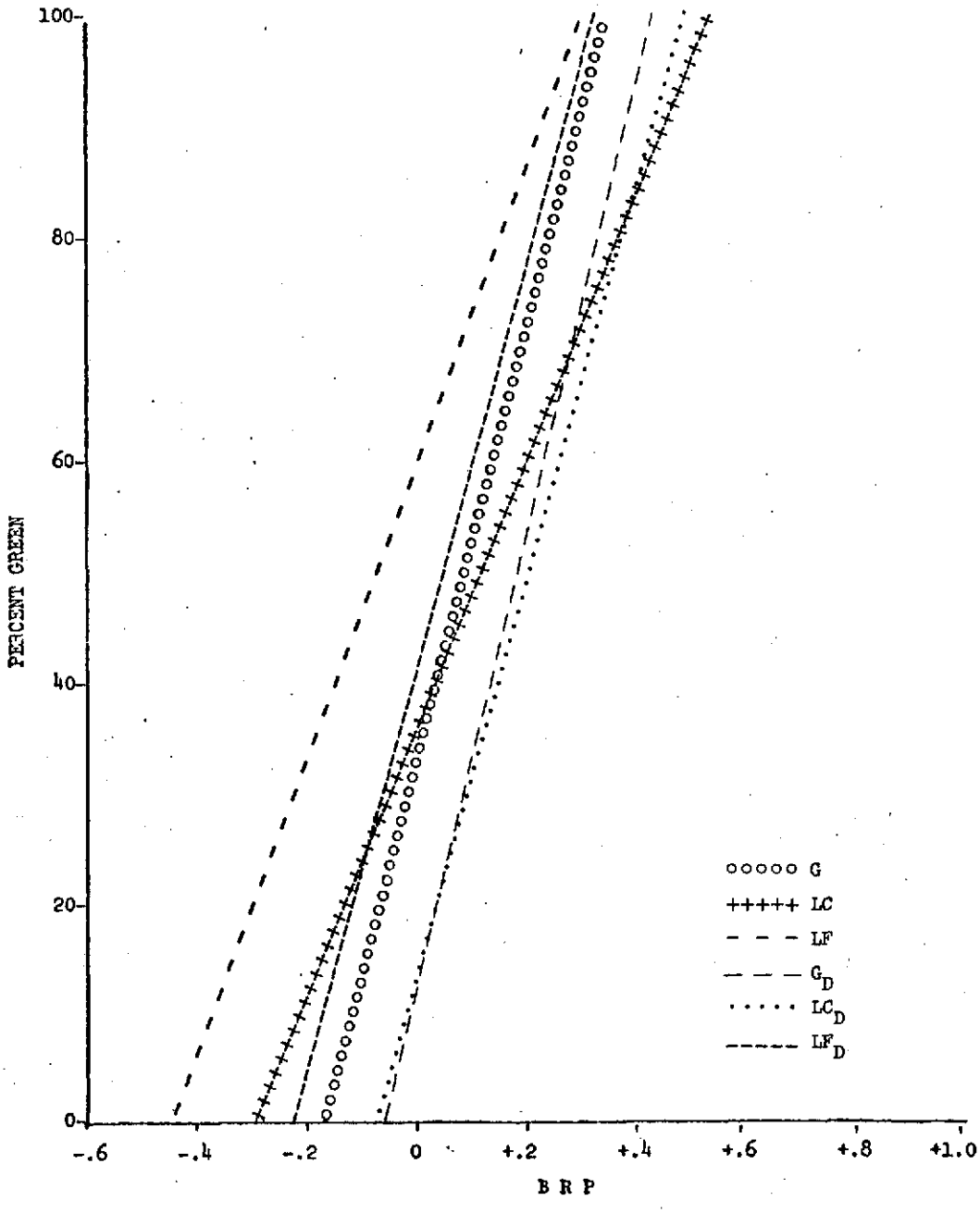



Figure 18. Relationship of BRP for the forested sites to canopy closure and color estimated visually and by use of a density slicer.

3.1.2 Densitometer Method

Density measurements on ERTS-1 transparencies were used to assess vegetation change. Several adjustments were made to the optical density readings to correct for instrument calibration and differences in processing and solar elevation between different sets of imagery (see Appendix K). The use of a small diameter densitometer aperture (four-tenths millimeter) has been shown not to adversely affect the accuracy of readings on forest sites. One correction not considered in this study was how to compensate for differences in atmospheric aerosol between overpasses. The basis for such an adjustment could be obtained from solar radiation instruments recording incident energy by wavelengths or bands.

The individual band densities and band-to-band ratios depicted seasonal changes in vegetation very well. Figures 19 and 20 graphically demonstrate for the Vermont and southern Indiana study sites how seasonal progression (Green Wave) and recession (Brown Wave) of forest vegetation correlate with band densities and ratios. The correlation may be further appreciated by reviewing Figures 21 and 22 which present ground observation photos documenting some of the significant seasonal vegetation changes at the two sites. The relationships are seen by comparing the density plots, ratios and ground photos over the same dates. Band 5 solar normalized densities generally increased (i.e., reflectance decreased) as leaf development progressed and decreased with vegetation recession (Figs. 19a and 20a). These results were expected as red reflectance would logically decrease when soil and red reflecting forest litter were covered increasingly by a developing forest canopy. Chlorophyll absorption of red wavelengths by the leaves would further this reduction. The Band 7 solar elevation

BURLINGTON, VERMONT

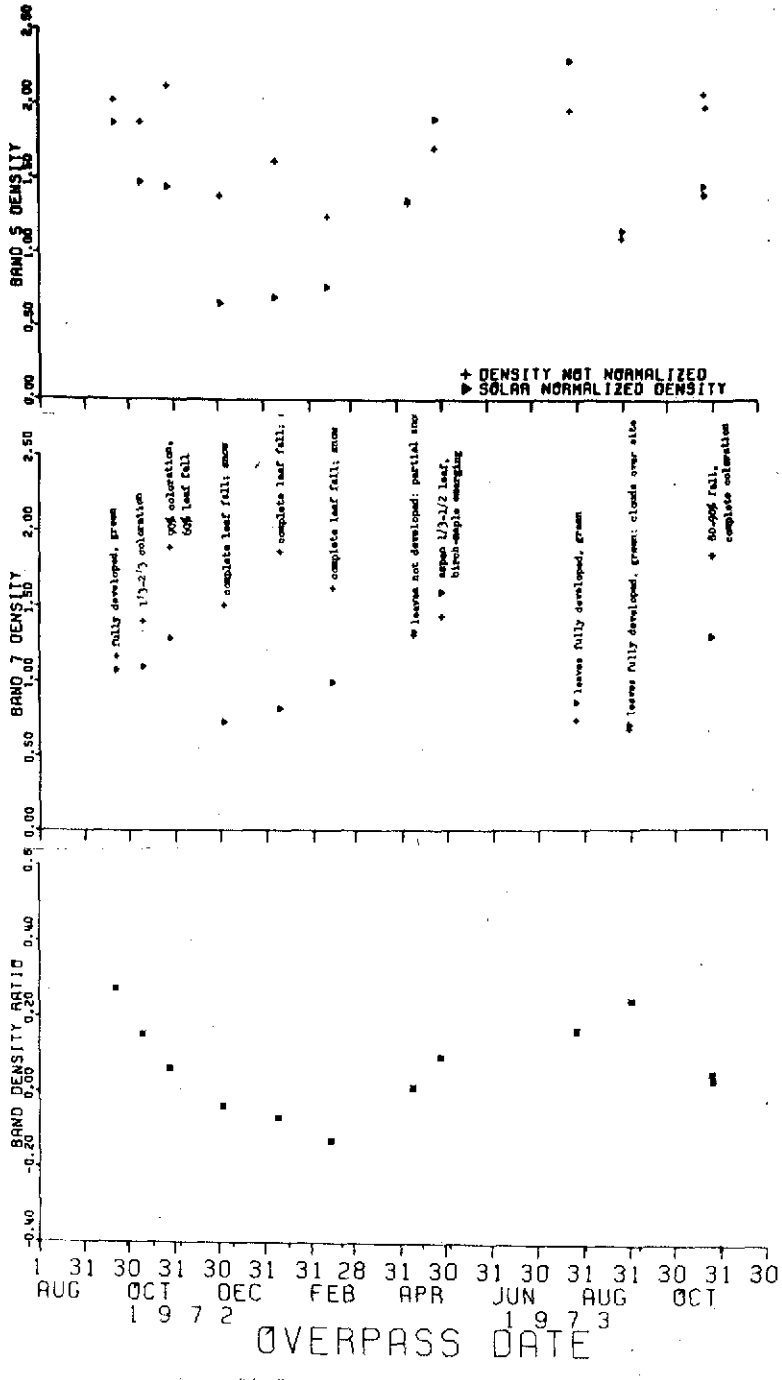



Figure 19. Density data plots for the Vermont Test Site: a) Band 5 densities over time, b) Band 7 densities over time, and c) Band ratios over time.

SOUTHERN, INDIANA

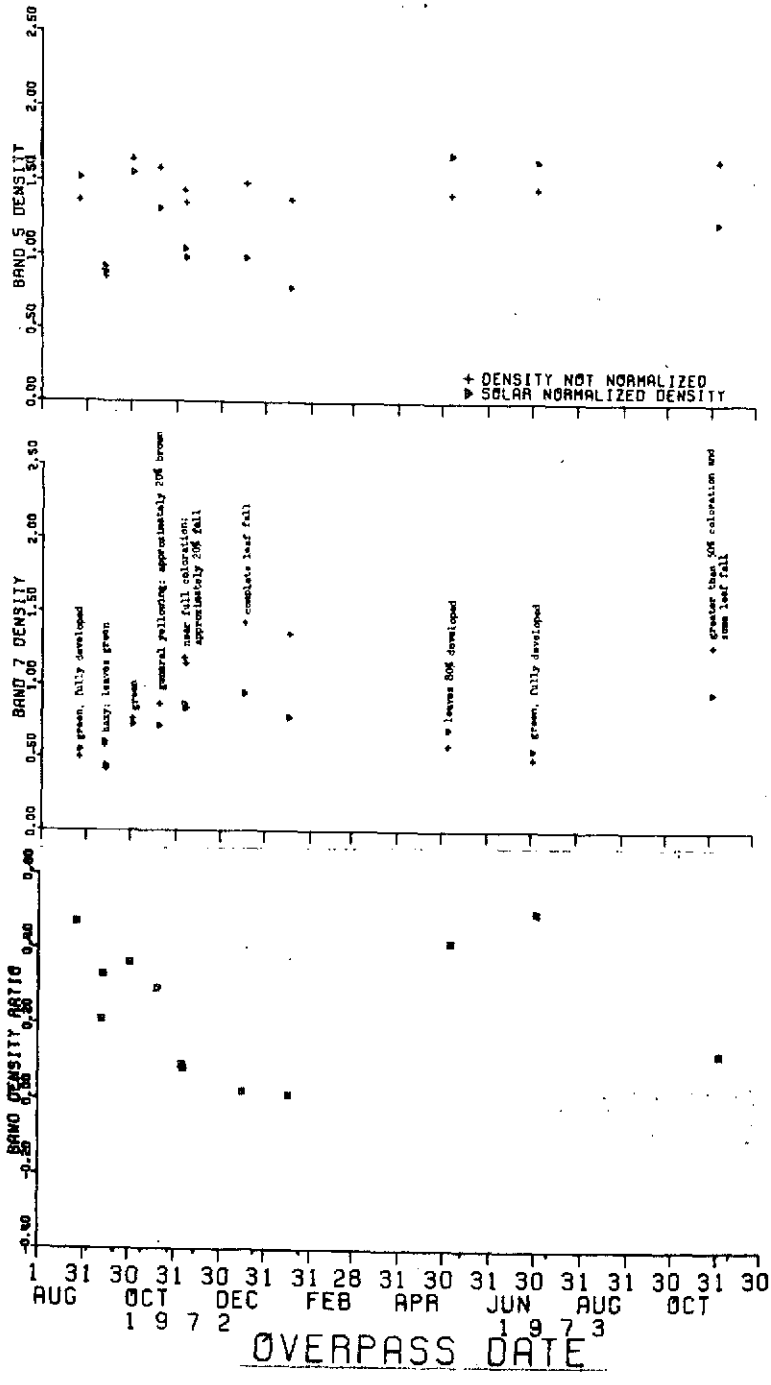
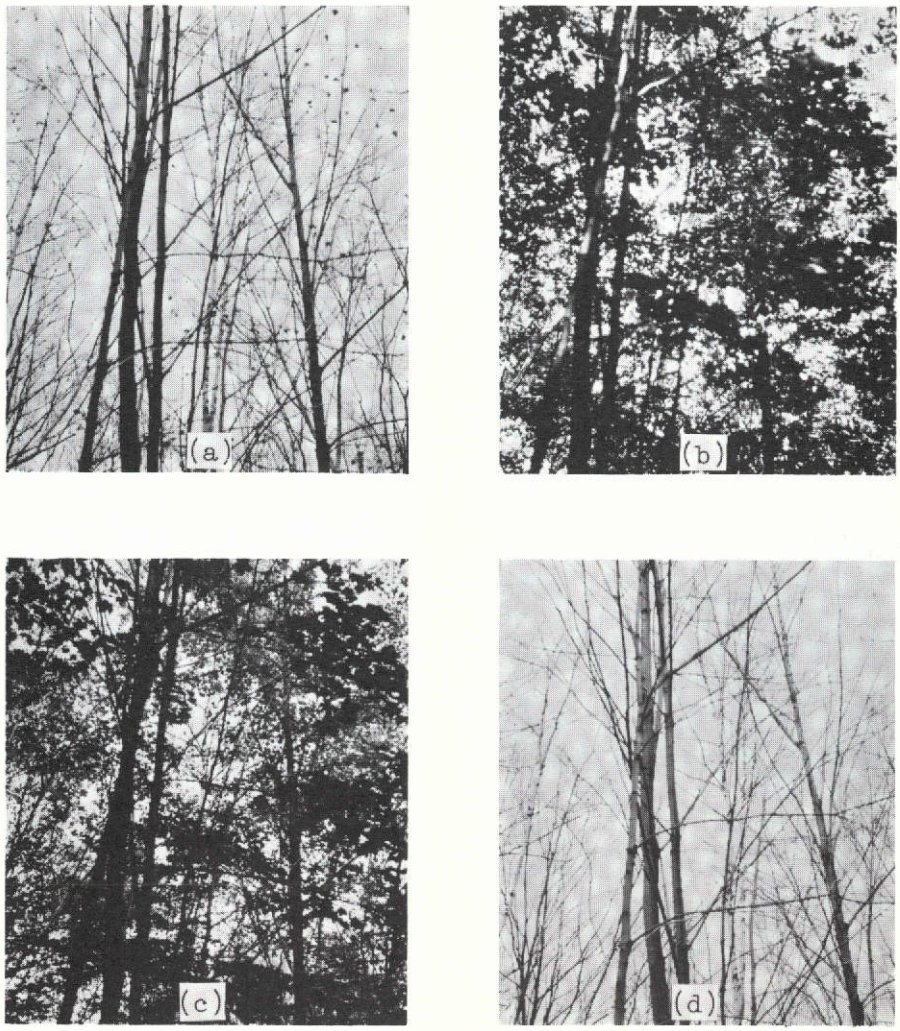



Figure 20. Density data plots for Southern Indiana Test Site: a) Band 5 densities over time, b) Band 7 densities over time, and c) Band ratios over time.




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Figure 21. Ground observation photography for the Vermont Test Site: a) leaves emerging 26 Apr 1973, b) green, fully developed leaves 21 Sept 1972, c) one-third to two-thirds coloration 10 Oct 1972, and d) complete leaf fall, snow 8 Apr 1973.

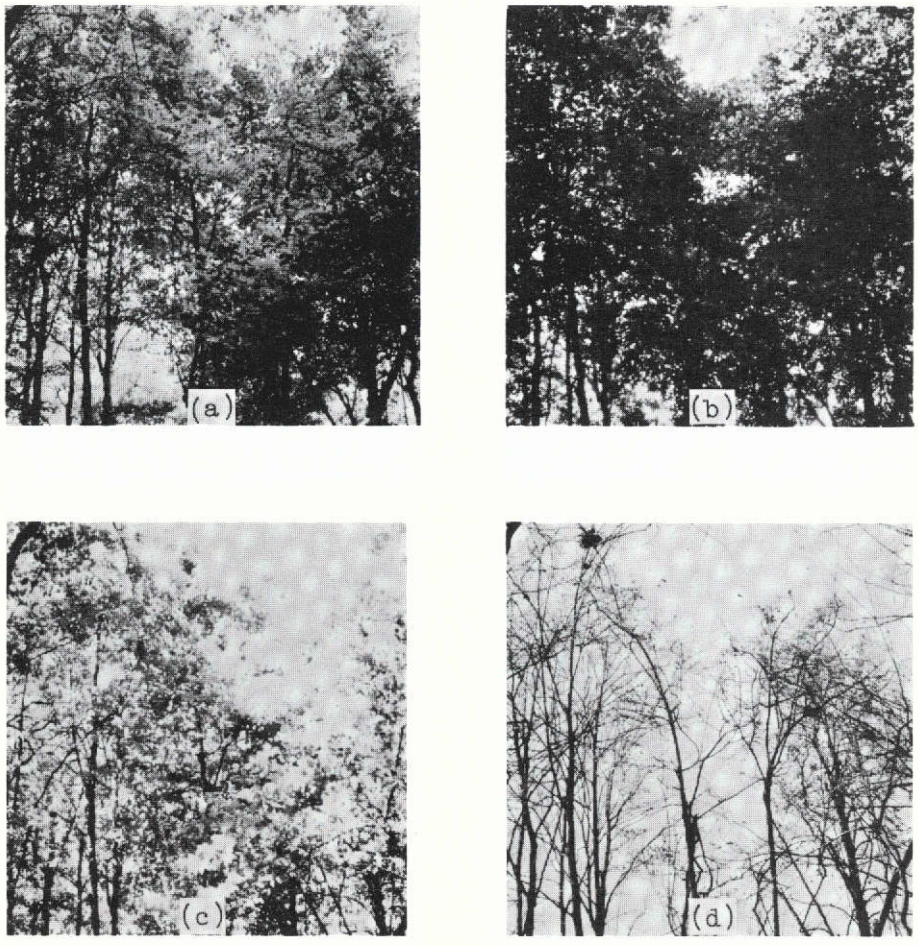



Figure 22. Ground observation photography for Southern Indiana Test Site: a) leaves 80% developed, 4 May 1973, b) fully developed leaves 24 Sept 1973, c) full coloration with some leaf fall 30 Oct 1972, and d) complete leaf fall 24 Nov 1972.

corrected densities demonstrated that near infrared densities decreased (reflectance increased) as foliage developed and started increasing with the fall Brown Wave (Figs. 19b and 20b). The densities, adjusted for everything except solar elevation differences, resulted in much the same conclusions. However, looking at the plots, it is evident that image density is in part determined by solar elevation, particularly at low angles.

Atmospheric haze, clouds and ground-snow cover alter the expected densities (Fig. 23). The influence of haze can be seen by looking at the September 1972 southern Indiana data. The Band 5 density is decreased appreciably while the Band 7 density remained quite low. One could conclude that haze is highly reflective of both bands' wavelengths. The same conclusion is reached when the site is cloud or snow covered as demonstrated by the change in densities for the August, January and February Vermont data (Fig. 19).

The band ratios for both sites indicate the progression and recession of forest vegetation development probably better than either the solar corrected or uncorrected individual band densities. The rhythmic cycle of vegetation change is more evident in the ratio graphical plots (Figs. 19c and 20c). It increases with leaf development and decreases through leaf coloration and leaf fall. The ratios at the two sites for similar stages of development and recession are comparable. Ratios between 0.25 to 0.50 indicated essentially full leaf development, all green; 0.10 to 0.25, some intermediate stage of leaf coloration or leaf development and below 0.10, complete leaf fall. While the solar elevation correction has no influence on these ratios, haze over the site during the growing season decreased them.

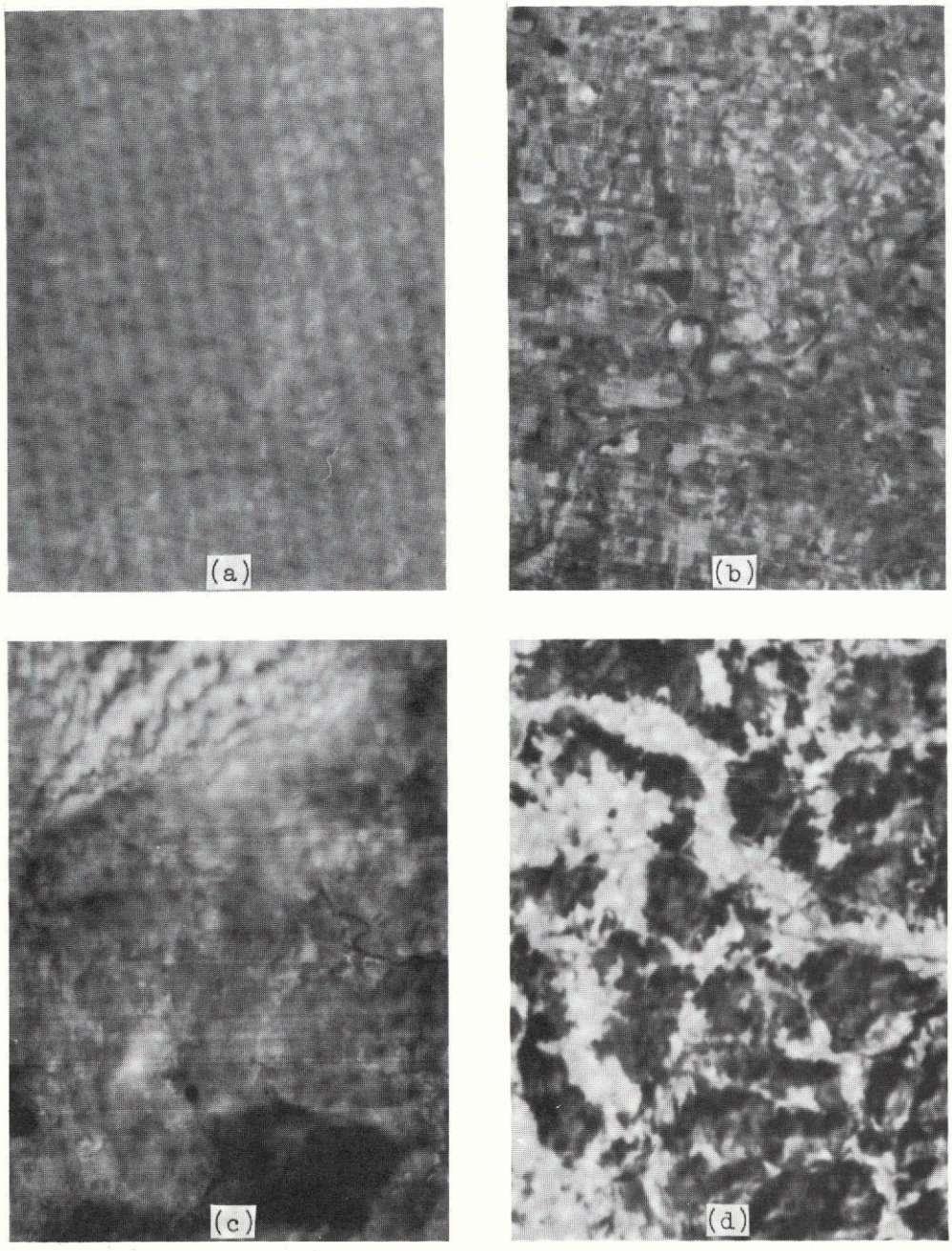



Figure 23. Haze, cloud and snow effects upon image density: a) haze over Southern Indiana Site, b) clear coverage of the Indiana Site, c) cloud over the Vermont Site, and d) snow over the Vermont Site.



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## 3.2 Crop Identification

The manually-developed factor called "ABIO" is intended for use in identification of alfalfa and estimation of percent green, plant height, and/or biomass. This factor is the result of an attempt to obtain a crop-specific linear algorithm using only relative radiance data (ratios of one band value to another within the same observation). Several "good" alfalfa crops from various sites were selected in the Columbia Valley and Rocky Mountain Corridors to provide the "standard" for building the equation. Test plot locations were carefully checked on computer printout gray-scale maps (to assure analysis of the correct data) to select test plots having more than 95 percent green. Plots of these data were compared with each other, also with data from less-green alfalfa, and data from non-alfalfa samples (including haze, snow, bare ground, etc.).

The twelve band ratios were "culled" to retain only those which consistently (in spite of noise factors mentioned above) vary directly with percent green of alfalfa crops only. The ratio, $\frac{\text{Band 6}}{\text{Band 5}}$, was found to vary most with percent green or biomass and was therefore made a multiplicative factor. Two other ratios, $\frac{6}{7}$ and $\frac{5}{4}$, were found to always be within a certain fairly narrow range of values and inversely proportional to percent green. These two ratios were used as "enabling" factors in the equation by subtracting them from their minimum values which were found to occur at approximately 100 percent green. A bias constant of 0.5 was chosen to adjust the range of resultant values. Those resultant values greater than 1.0 are used in biomass determinations, but are limited to 1.0 maximum for percent green indication. The algorithm is:

$$\text{ABIO} = \left[0.5 + (.964 - [\tfrac{6}{7}]) + (.567 - [\tfrac{5}{4}])\right] [\tfrac{6}{5}]$$

As a partial test of the ability of "ABIO" to reject crops other than alfalfa, regression equations G-W-ABIO and G-R-ABIO (in Table 7) were run for wheat and range, respectively, to compare with a similar "identity" test for alfalfa (equation G-A-ABIO). Statistical data on the regression equations using ABIO as the independent variable are presented in Table 7.

TABLE 7. Statistical Information on the ABIO Algorithm for Alfalfa, Wheat and Range.

| Equation | Crop | $R^2$ | F Test | Regression Equation |
|---|---|---|---|---|
| G-A-ABIO | Alfalfa | .34 | 18.3*** | G = +52.7 (ABIO) +18.9 |
| G-W-ABIO | Wheat | .20 | 10.8*** | G = +49.3 (ABIO) +13.0 |
| G-R-ABIO | Range | .00 | N.S. | G = -00.89 (ABIO) +13.2 |

Since $R^2$ and F for wheat and range are much lower than for alfalfa in the ABIO regressions even when best-fit values for intercepts and ABIO coefficients are used, these equations might serve as indicators to distinguish alfalfa from wheat and range. If the actual equation for alfalfa (G-A-ABIO) were used on all the crops (instead of the best-fit ABIO equations, G-W-ABIO and G-R-ABIO), the rejection of non-alfalfa plots would be even more obvious since the values for $R^2$ and F would be lower than those listed in Table 7. Thus, it is suggested that equation G-A-ABIO be further studied as a possible identifier for alfalfa, especially where snow, bare ground or unclear atmospheric conditions exist.

Three equations for indicating percent green for alfalfa, wheat, and range, respectively, are as follows:

Equation G-A-12R: Percent Green = +6.72 $[\frac{4}{5}]$ -458 $[\frac{4}{6}]$ -329 $[\frac{4}{7}]$ +898 $[\frac{5}{6}]$ +129 $[\frac{5}{7}]$ +182 $[\frac{6}{7}]$ -764 $[\frac{5}{4}]$ -442 $[\frac{6}{4}]$ +1102 $[\frac{7}{4}]$ -11 $[\frac{6}{5}]$ -442 $[\frac{7}{5}]$ -608 $[\frac{7}{6}]$ +1382

Equation G-W-12R: Percent Green = +545 $[\frac{4}{5}]$ -330 $[\frac{4}{6}]$ -115 $[\frac{4}{7}]$ +306 $[\frac{5}{6}]$ +325 $[\frac{5}{7}]$ -233 $[\frac{6}{7}]$ -979 $[\frac{5}{4}]$ +988 $[\frac{6}{4}]$ +167 $[\frac{7}{4}]$ -496 $[\frac{6}{5}]$ -251 $[\frac{7}{5}]$ +50 $[\frac{7}{6}]$ +4516

Equation G-R-12R: Percent Green = -293 $[\frac{4}{5}]$ +176 $[\frac{4}{6}]$ +63 $[\frac{4}{7}]$ -524 $[\frac{5}{6}]$ +127 $[\frac{5}{7}]$ -741 $[\frac{6}{7}]$ -53 $[\frac{5}{4}]$ +476 $[\frac{6}{4}]$ -476 $[\frac{7}{4}]$ -276 $[\frac{6}{5}]$ +289 $[\frac{7}{5}]$ -693 $[\frac{7}{6}]$ +1912

NOTE: The numbers in brackets are band numbers used to obtain the twelve ratios (12R); the values to be entered are radiance values for the bands.

A possible approach, using a percent green indicator equation such as G-A-12R, to identify or inventory alfalfa in a given area, would be to use satellite data from a date when the alfalfa fields would be expected to have a percent green of 100 (under these conditions, this equation is probably preferable to G-A-ABIO). This would be on any date when the height of alfalfa is greater than about 14 inches. Phenological data would help determine this date. Thus, the computer could be programmed to test by linear regression, the algorithm against 1.0 for each pixel or sample of data (each covering about one acre) in the area using equation G-A-12R (or equation G-A-ABIO). The value for $R^2$ and F in each test sample would indicate the probability of the tested sample being alfalfa. This same procedure could be used with indicator equations other than percent green if the correct ground value for the dependent variable (such as height or percent green x height) can be estimated quite accurately. The location and inventory of other crops could perhaps proceed in a similar manner.

Equations G-W-12R and G-R-12R might be used for wheat and range, respectctively, but the specification for the expected value of G in each equation would be more difficult. For alfalfa, equation G-A-ABIO is probably preferable to equation G-A-12R, especially where noise factors such as smoke, haze, clouds, snow, or flooding, etc. are present.

Further testing of these algorithms against all other crops is desirable. For example, the limited data available indicates the "spectral signature" for a conifer forest will be quite similar to that for alfalfa. However, the total radiance from the forest is always significantly less than that from alfalfa.

## 3.3 Biomass

It appears that the height of a given crop is closely correlated to biomass or vegetative yield. If these factors are hightly related it might be feasible to use satellite data to specify the biomass in a given area with an algorithm which indicates plant height.

Some regression equations were computed with plant height as a function of satellite data. Two of the most promising equations are as follows:

Equation H-A-ABIO: Alfalfa height (in.) = 7.185 (ABIO) +3.41

Equation H-R-12R: Range Height (in.) = $-105.3\left[\frac{4}{5}\right] + 209.0\left[\frac{4}{6}\right] - 117.9\left[\frac{4}{7}\right] - 174.4\left[\frac{5}{6}\right] - 12.62\left[\frac{5}{7}\right] - 77.19\left[\frac{6}{7}\right] - 60.11\left[\frac{5}{4}\right] + 244.5\left[\frac{6}{4}\right] - 230.9\left[\frac{7}{4}\right] - 587.5\left[\frac{6}{5}\right] + 569\left[\frac{7}{5}\right] - 781.6\left[\frac{7}{6}\right] + 1105$

## 3.4 Summary of Possible Uses for Satellite Data

Procedural methodologies for utilizing satellite data are strongly dependent on availability of ground observations for developing algorithms.

For example, to apply satellite data to the inventory of such crops as wheat and corn which do not rapidly approach 100 percent green cover, it would be desirable to have phenological ground data over several years. This would assure a more accurate specification of the percent green for developing crop inventory and identification algorithms.

It is apparent that many more specific algorithms for various crop types or plant communities can be developed, but additional study of satellite and ground data is needed.

### 3.4.1 Monitoring Green and Brown Waves

These algorithms appear most appropriate for determination of "Green Wave passage" for individual crops or plant communities. Detection of overall or general Green and Brown Wave passage should probably depend on "less specific" or "less crop sensitive" algorithms such as BRP (using fewer channels of satellite data). Some of the possible equations for the above uses are tabulated in Table 8.

TABLE 8. Equations Recommended for Further Testing to Estimate Percent Green.

| Crop | Equation | |
|---|---|---|
| Alfalfa | G-A-12R | See page 55 |
| Winter Wheat | G-W-12R | |
| Range | G-R-12R | |
| Average of all foliage (Green Wave) | G-R-BRP | See page 42 |
| Forest (Green Wave) | G-F-BRP | |
| Forest (Brown Wave) | LF-BRP | |
| Forest (Brown Wave) | LC-BRP | |

### 3.4.2 Identification or Inventory of Crops

Successful identification of crop type may ultimately depend on the availability of reasonably accurate estimates of percent green or height. Percent green or height is then compared with the computed percent green or height from certain algorithms (using satellite data) to determine which algorithm gives the closest correlation. The "best" algorithm then indicates crop type.

This procedure is relatively simple for a coniferous forest where the percent green or height remain fairly constant. Crops which rapidly approach 100 percent green during the growing season can also easily fit into this procedure. However, other foliage which is slow to increase its percent green and never attains a fixed percent green (such as complete green cover) makes this procedure more difficult. It is probable that several years' accumulation of phenological data for these crops would be needed to develop this procedure for those types of crops.

### 3.4.3 Accuracy and Further Testing

It is quite apparent that those algorithms which appear promising in previous paragraphs should be tested more thoroughly to verify their usefulness. Additional crop species should be studied to determine whether algorithms are similar for some crops. For example, radiances from alfalfa and clover may be so similar that no single algorithm or group of algorithms will adequately differentiate between these two crops. Data on coniferous forests are available and should receive further attention. In general, it seems reasonable to expect more precise information about a radiation "source" (foliage in this case) when there are more bands (each with a

smaller range of wavelengths) available for analysis. However, radiances on the four MSS bands available from ERTS-1, as described in preceeding sections, have provided very useful information relating to plant phenology.

## 4.0 CONCULSIONS

Results from the Phenology Satellite Experiment show that it is feasible to monitor by satellite phenological changes over large regions of the earth. In addition, crop identification and inventory are definitely within the realm of possibility.

Satellite data, such as that received from ERTS-1, will make world-wide phenological monitoring possible. This is necessary to develop universally applicable phenoclimatic models. However, to accomplish this the frequency of satellite coverage should be increased to an optimum of three to no more than six days between passes. The two factors dictating this are (1) the rapid change with time of various stages of plant development and (2) added coverage would increase the possibility of receiving good data from the more cloud covered areas.

This research leads to the following conclusions concerning the application of an ERTS-type system.

ERTS-type (operational) data will provide the only reasonable means of making synoptic phenological measurements over interregional areas in a time frame required for assessing the complex soil-air environment to provide answers to management and planning questions such as:

1. status of plant development,
2. plant management, including storage and transportation,
3. tentative yield comparisons between regions or countries,
4. feasibility of plant introduction.

These answers, obtained from phenology satellite data without the need for ground observations, become important in the following cases:

1. In less developed areas (those devoid of support data),

ERTS data becomes a useful quantified data base which can be applied to existing models and those yet to be developed.

2. In areas of political or economic sensitivity.
3. In times of widespread ecological stress.
4. In remote areas of even the better developed regions.
5. Where areas of natural vegetation are to be converted to agricultural use.

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## APPENDICES

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Appendix G - Band Ratio Parameter Graphs for Eastern Corridors

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Appendix I - Relative Spectral Response Graphs for Western Corridors

Appendix J - Band Ratio Parameter Graphs for Western Corridors

Appendix K - Radiation and Atmospheric Corrections

Appendix L - Guidelines for Assessing Vegetation Changes Using ERTS-1 Satellite Imagery

Appendix M - Plant Species Composition of Range Sites



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# APPENDIX A

## STEERING COMMITTEE AND COOPERATIVE INVESTIGATORS



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Steering Committee of Phenology Satellite Experiment

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North Carolina State University
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# APPENDIX B

## GROUND OBSERVATION SITES



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GROUND OBSERVATION SITES

| Corridor/Site | Coordinates |
|---|---|
| **A. APPALACHIAN CORRIDOR** | |
| Orono, Maine | 44°55'N, 68°40'W |
| Richmond, Maine | 44°07'N, 69°50'W |
| Burlington, Vermont | 44°25'N, 73°00'W |
| Ithaca, New York | 42°27'N, 76°27'W |
| State College, Pennsylvania | 40°46'N, 77°53'W |
| Morgantown, West Virginia | 39°41'N, 79°45'W |
| Raleigh, North Carolina | 35°43'N, 78°41'W |
| **B. MISSISSIPPI VALLEY CORRIDOR** | |
| Lansing, Michigan | 42°40'N, 84°30'W |
| Lafayette, Indiana | 40°26'N, 86°51'W |
| Southern Indiana | 38°20'N, 87°40'W |
| Jefferson City, Missouri | 38°46'N, 92°11'W |
| Barnsdall, Oklahoma | 36°33'N, 96°09'W |
| Commerce, Texas | 33°15'N, 95°50'W |
| College Station, Texas | 30°34'N, 96°20'W |
| **C. ROCKY MOUNTAIN CORRIDOR** | |
| Browning, Montana | 48°44'N, 113°11'W |
| Logan, Montana | 45°47'N, 111°27'W |
| Camas, Idaho | 43°58'N, 112°18'W |
| Snowville, Utah | 41°59'N, 112°39'W |
| Kanosh, Utah | 38°49'N, 112°33'W |
| Colorado City, Arizona | 36°59'N, 112°59'W |
| **D. COLUMBIA VALLEY CORRIDOR** | |
| Havre, Montana | 48°27'N, 109°47'W |
| Charlo, Montana | 47°27'N, 114°09'W |
| Helmer, Idaho | 46°50'N, 116°27'W |
| Bickleton, Washington | 46°03'N, 120°13'W |

# APPENDIX C

## FIELD GUIDE FOR GROUND-OBSERVATION PHOTOGRAPHS

# FIELD GUIDE
# FOR
# GROUND-OBSERVATION PHOTOGRAPHS

M. Ashley & J. Rea

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August 5, 1972


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## I. INTRODUCTION

For centuries man has realized that there is a relationship between climate and the seasonal occurrences of leaves, flowers, birds and other natural phenomena. The Romans and Chinese had phenological calendars to aid farmers in planting and harvesting at the proper times. Up until now, however, these observations have been restricted to local areas. With the launch of NASA's ERTS-I satellite, it will be possible to record phenological events over the entire surface of the earth and study climate-plant relationships on a regional or even a world-wide scale.

As part of the Phenology Satellite Experiment, ground-truth photographs will be taken to provide some of the basis for interpreting the satellite imagery. To be useful, these ground-truth photographs will have to be taken following certain procedures. This field guide will hopefully set forth standardized procedures which will give comparable and compatable data for the photography taken at several different times at many different sites.

The procedures as outlined in the remainder of this guide, are based on observations made at the University of Maine, School of Forest Resources during the spring of 1972 while taking experimental ground-truth photographs at two sites. There will probably be changes to these procedures as the program gets underway and they will be incorporated in subsequent revised editions.

## II. EQUIPMENT

This list of equipment is not all inclusive nor is it expected that equipment need be purchased to conform to that listed here if some substitution can be made without reducing the quality of the photographs. All equipment

used at a given site will be subject to the approval of the corridor coordinator. A list of the equipment used at the different sites will be distributed to the site cooperators.

A. Camera. A quality camera such as a Nikon, Minolta or Hasselblad with a 50mm lens is necessary. A 35mm camera is satisfactory; however, a 70mm format camera is more desirable if it has a 50mm lens. The larger format makes slides that have nearly four times the area of 35mm slides, thus they contain more information and can be masked to show a desired smaller view. This is advantageous if camera orientation for the same scene varies slightly from one exposure period to the next.

B. Tripod. Since the series of photographs will be taken over an extended period of time, and each sequential photograph should have exactly the same position of view, a tripod and permanent base must be used to maintain the same relative orientation. It is not ordinarily possible to reproduce similar views each time by hand holding the camera. An example of a permanent base is illustrated in Figure 1. Figure 2 shows a tripod mounted on the base. This base will be permanently located in the field using wooden stakes driven into the ground. The tripod must have a fully articulated head to accommodate the different views desired. Once set up, notes of its orientation must be made to ensure duplication of the view the next time the camera is set up.

C. Film. Color transparency film is recommended as it is available, costs less to process than prints, and the color can show more detail than black and white film. A high ASA rating is desirable because it can accommodate varied light conditions and provide a greater depth of field. Ektachrome-X will be the film type used in this study.

D. Exposure meter. To obtain consistent quality photographs, an exposure meter of some type is necessary. Exposure settings will be found to vary greatly under a tree canopy while taking pictures of different scenes within

a forest stand. Some cameras have exposure meters built in while others do not and an auxiliary meter is needed.

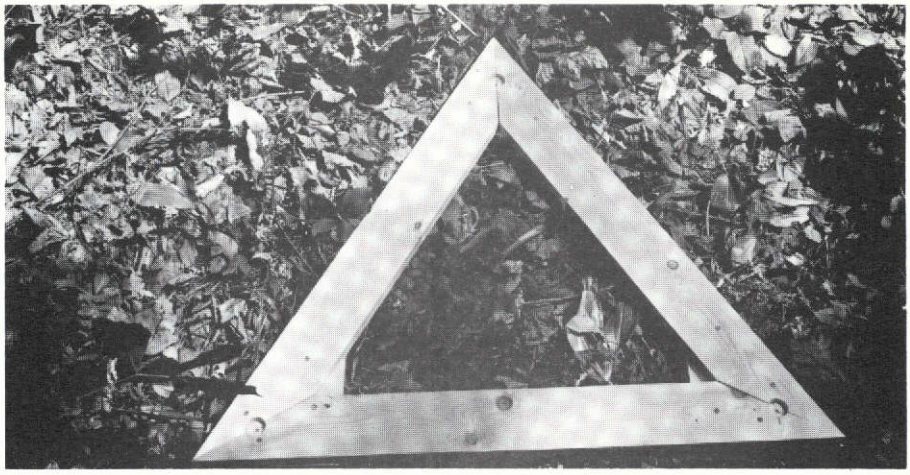


Figure 1. Permanent Tripod Base

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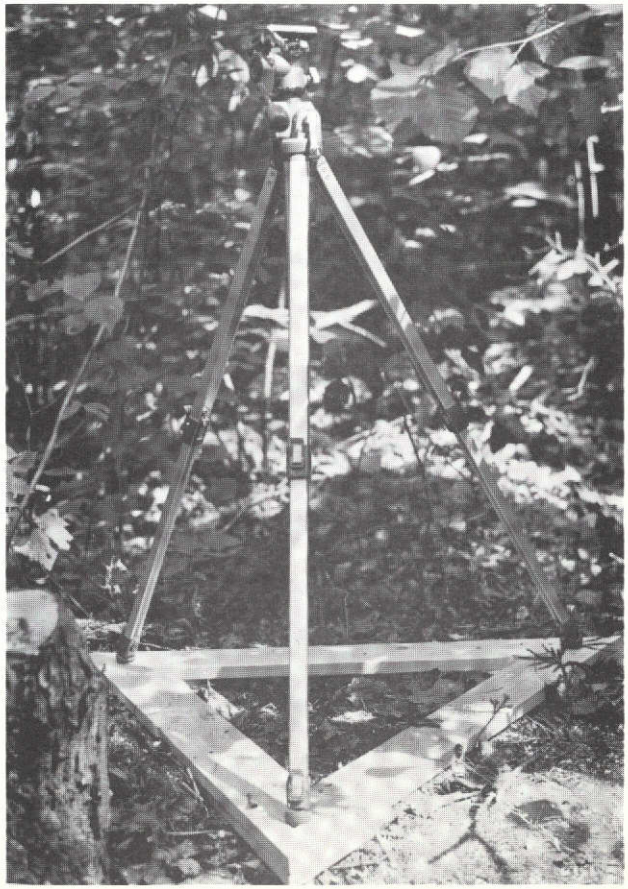


Figure 2. Tripod Mounted on the Permanent Tripod Base

## III. SITE LOCATION

The general geographic locations of the experiment test sites have been located as outlined in Volume I of "Phenology Satellite Experiment Technical and Management Proposal". The specific sites to be used for the ground-truth photography within the test sites should be chosen with the following considerations, subject to an on-site evaluation and approval by the corridor coordinator:

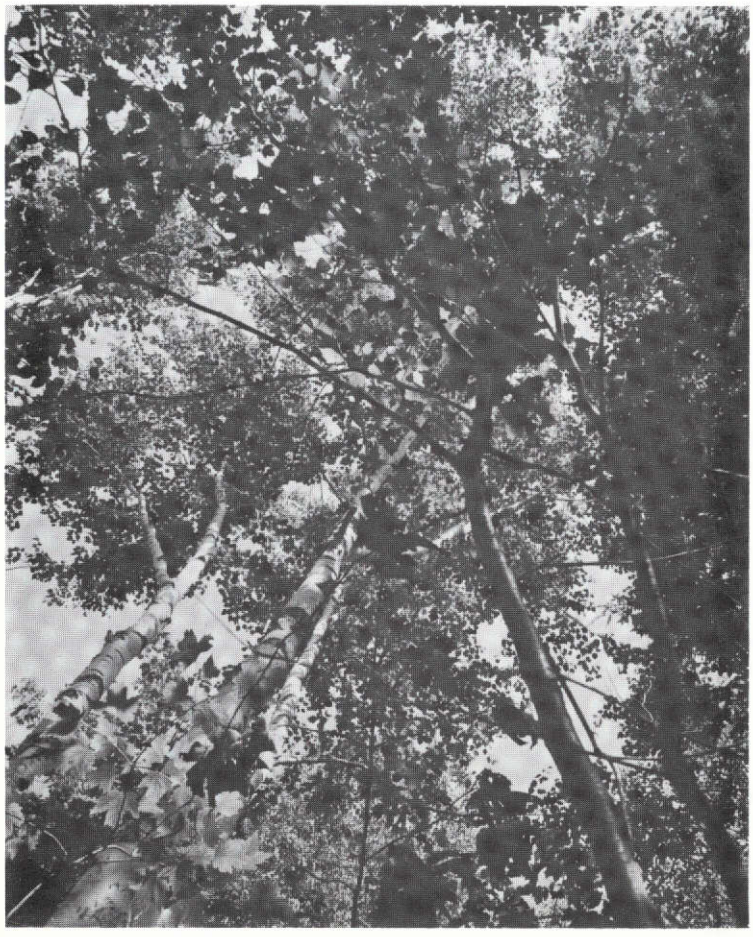
1. Ease of access. The site should be located near a road or path which facilitates getting to it with the required equipment.

2. Stand composition and size. The ground-truth site should be located in a hardwood forest stand of at least ten acres in size. Agricultural land planted to crops should also be in close proximity to the site along with a major highway, river system or other natural or cultural feature which can be used to identify the site on the satellite imagery.

3. Site location within the stand. The camera should be set up at a point within the stand where an unobscured view of the upper hardwood crown canopy can be obtained. No brush or limbs from regeneration should obscure the scene. The photographic point should also be in an area of relatively high stand density without large openings in the crown canopy; i.e., an area which will be mostly shaded by crown cover when the leaves are out. Areas where there are dead or low vigor (dying trees) in the upper canopy should be avoided. Figures 3 through 6 can be used to clarify these statements.

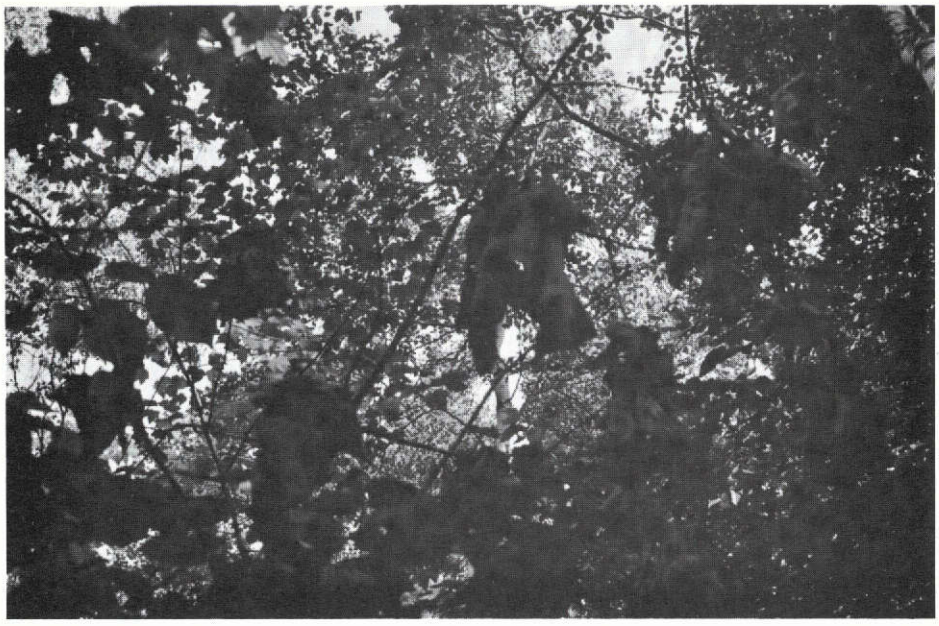
4. Selection of photo orientation. See the section entitled "Camera Orientation

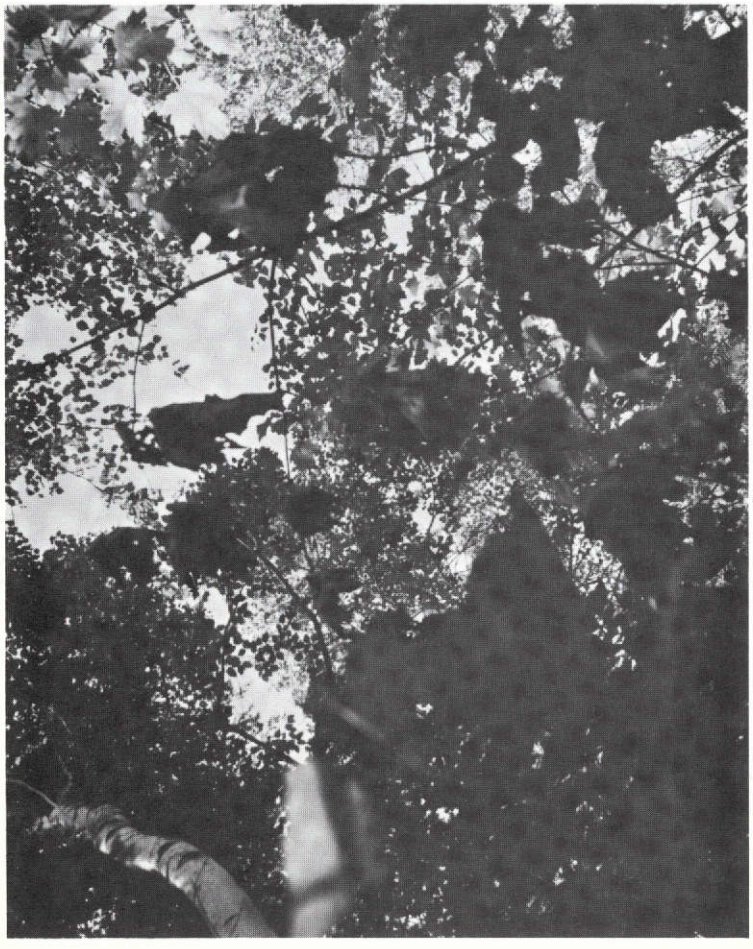




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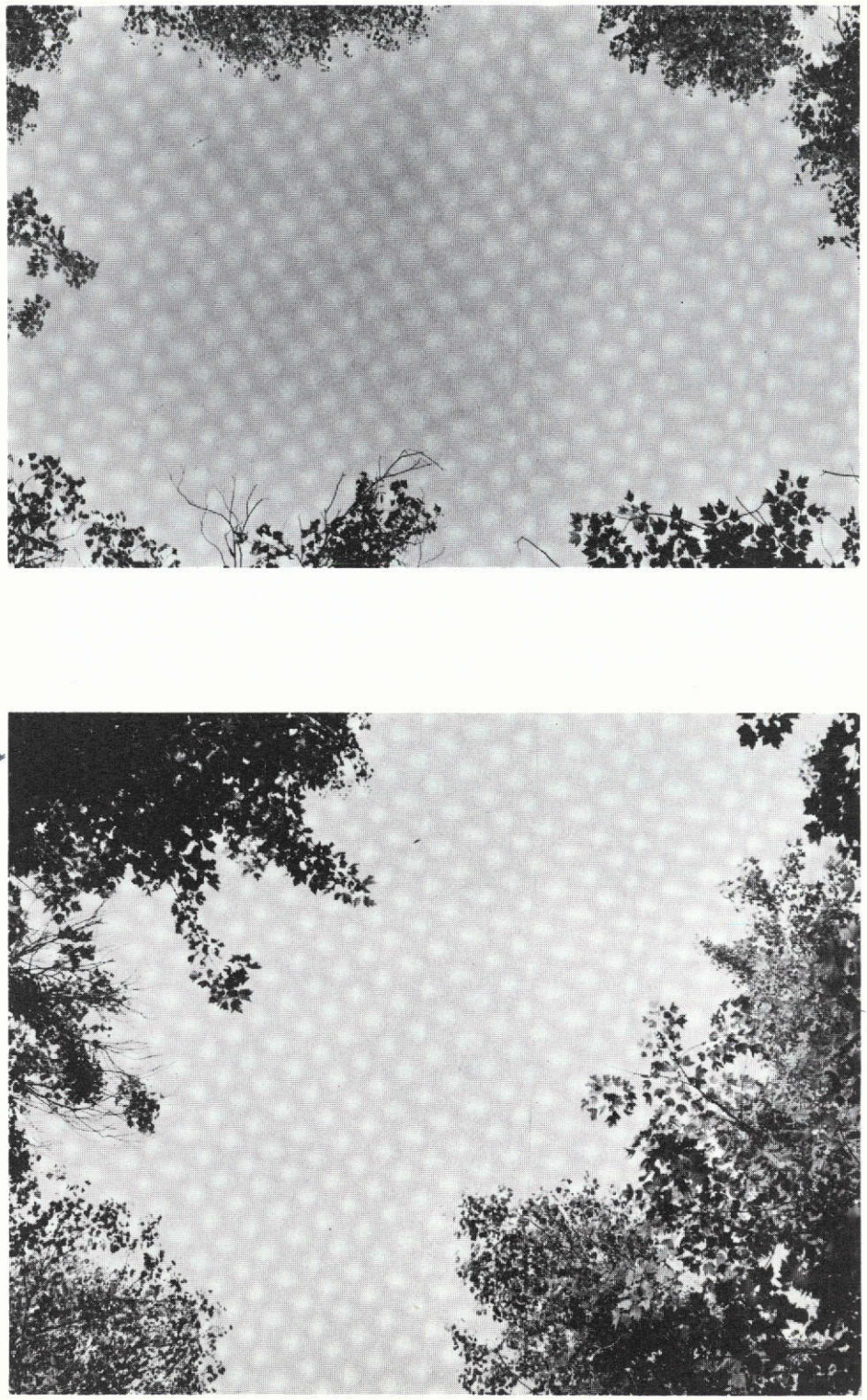
Figure 3. Unobscured Views of the upper Crown Canopy





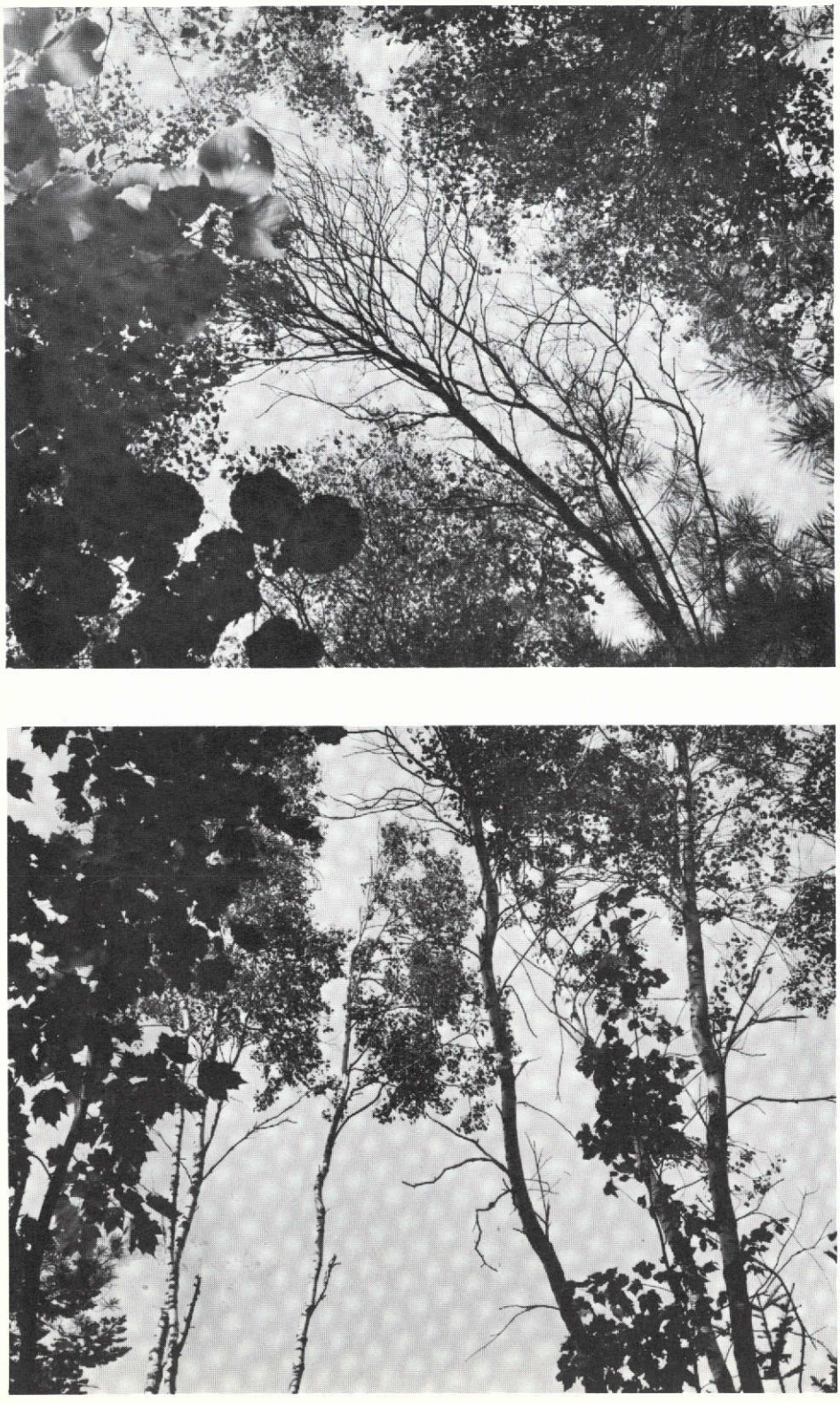
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Figure 4. View of Upper Crown Canopy Obscured by Lower Vegetation, Limbs and Leaves



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Figure 5. Large Openings Which Should be Avoided in Photography



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Figure 6. Dead and Low Vigor Trees Should also not be Included in Photography

## IV. SCHEDULING OF PHOTOGRAPHS

To be most useful, ground-truth photography should be taken the same day the satellite obtains its imagery. The ERTS-I satellite will cover the same point on the Earth's surface every eighteen days. A schedule of coverage has been tabulated for each site and is included as Appendix A. The orbit path is such that the satellite will cover adjacent Polar oriented strips of land moving in a westerly direction on consecutive days. Another parameter of the ERTS-I orbit is that it will cover the same location at the same time every eighteenth day. This should provide a relatively consistent sun elevation above the horizon between satellite passes, thus making interpretation easier.

In taking the ground photography, it is best to take the photographs when the sun is not too high as this causes too much contrast between the sky and the trees. This will be discussed in more detail in the "exposure" section of this guide.

The exact schedule of photography for each site will be dependent upon the expected time of each stage of phenological development, the rate of change of this development and the dates that the satellite will be passing over the site. A probable schedule for each site is included as Appendix B.

The photography will be taken in three different series; spring, summer and fall. For the spring series, the site photographer should make sure that the first of the eleven sets of photography is taken before leaf-out starts. To accomplish this, the first set of photos can be taken two or three weeks before leaf-out is expected. The day of this photography should also coincide with a satellite overpass. The second set of photography in this series will be taken as soon as the trees in the stand start to burst their buds. The next eight sets will be taken at six day intervals to have one out of every three sets coincide with a satellite overpass. For example, if for a particular

site leaf initiation is expected on May 15 and from Appendix A satellite overpasses are as follows:

May 1
May 19
June 6
June 24

the site photographer should plan his first set of photography for May 1. If for this example, leaf initiation actually started on May 9, the second set of photography will be on this date with subsequent six-day sets on the following dates:

May 13
May 19 satellite overpass
May 25
May 31
June 6 satellite overpass
June 12
June 18
June 24 satellite overpass

This accounts for ten of the eleven sets of photography for documenting the spring sequence of phenological events. The date for the remaining set is left to the discretion of the site photographer to catch any repid change in stand development which may occur over a period of two to four days and would not be recorded if the full six-day period were waited for. Such rapid change will sometimes occur early in the growing season after a few days of relatively hot weather.

The two sets of summer photography will be taken as indicated in Appendix B to coincide with satellite overpasses in mid and late summer. Following these will be the fall series of ten shots. The timing of this sequence will be based upon the same factors as the spring photography. The site photographer should make sure that the last fall set is taken after leaf-fall is completed within the stand. The first set of photos should be taken two to three weeks before leaf coloration is expected to start. The next eight sets will be taken at six day intervals to coincide with satellite overpasses. The first set of these eight will be taken on the nearest six-day date after the leaves in the stand start to show some change in coloration. For

illustration, if leaf coloration is expected to start on September 20 and from Appendix A satellite overpasses are on: Sept. 7
Sept. 25
Oct. 13
Oct. 31

the site photographer should plan his first fall set of photography for September 7. If, for this example, the leaf coloration started on September 17, the subsequent series of photography would be on:

| | |
|---|---|
| Sept. 19 | Oct. 13 satellite overpass |
| Sept. 25 satellite overpass | Oct. 19 |
| Oct. 1 | Oct. 25 |
| Oct. 7 | Oct. 31 satellite overpass |

The remaining tenth set of photography would be held in reserve to take at the first scheduled satellite overpass after leaf-fall in completed.

Weather is, of course, a limiting factor in scheduling any photography. If the site photographer feels that the necessary conditions for good quality photography are not obtainable on a scheduled photographic date because of rain, heavy cloud cover or other factors, the photography may be rescheduled within plus or minus two days of the original scheduled date. One possible reason for setting a set of photography ahead would be to avoid the effects of a predictable large storm system such as a hurricane. All other dates in the original schedule should be adhered to even after such changes.

Another factor to be considered is the possible difference in leaf-out times of different species within the stand. The starting times "at leaf initiation" of the photography schedule described above means that photography will be started when the first species in the upper crown canopy initiates leafing. The same principle applies to the fall sequence.

If any questions arise in scheduling photography which are not answered in this manual, the corridor coordinator should be contacted.

## V. CAMERA ORIENTATION AND SET UP

A good documentation of phenological change will be available if the camera is properly located. To obtain the best views of the forest canopy from the ground, the vertical angle of the camera must be between forty-five and ninty degrees. The site photographer should choose an angle that will show the stages of leaf development most clearly for the hardwood trees in the upper crown canopy. The angle should be large enough to obtain a sky background because it will accent the stages of change (Figures 7 and 8). In addition to the views up through the canopy, any view of the canopy from some vantage point (platform, roof top, hill overlook, tower) apart from the stand is useful (Figure 9). The object here would be to look down on the crowns in the stand.

Specifically, the twenty shots per roll of film should be oriented as follows: on each photo site five shots will be taken; four vertical-obliques around a common picture point--platform mounting and one horizontal shot through the stand. The oblique photography will be orientated as described above. The horizontal photo will be taken approximately twenty feet from the photo point back over the photo point from an orientation which will best show the general appearance of the area (Figure 10). As with the oblique photography, care must be taken to establish the same view each time. This can be easily accomplished by standing over an established stake driven in the ground or by standing against a convenient tree whose location is carefully noted.

Once a series of different views of a site have been selected, each succeeding series must have exactly the same views. To facilitate reproduction of these views, exact notes of camera orientations and tripod base locations must be taken. A target of marking tape (visicon plastic or cloth) stapled to a tree in the view of the camera will facilitate reproduction of the view. Figure 11 shows

an illustration of a target used to obtain the same scene at two different photo times.



Figure 7. Sky Background Will Accent Stand Change



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Figure 8. Photo Having too Little Sky Background to Contrast the Stand Development

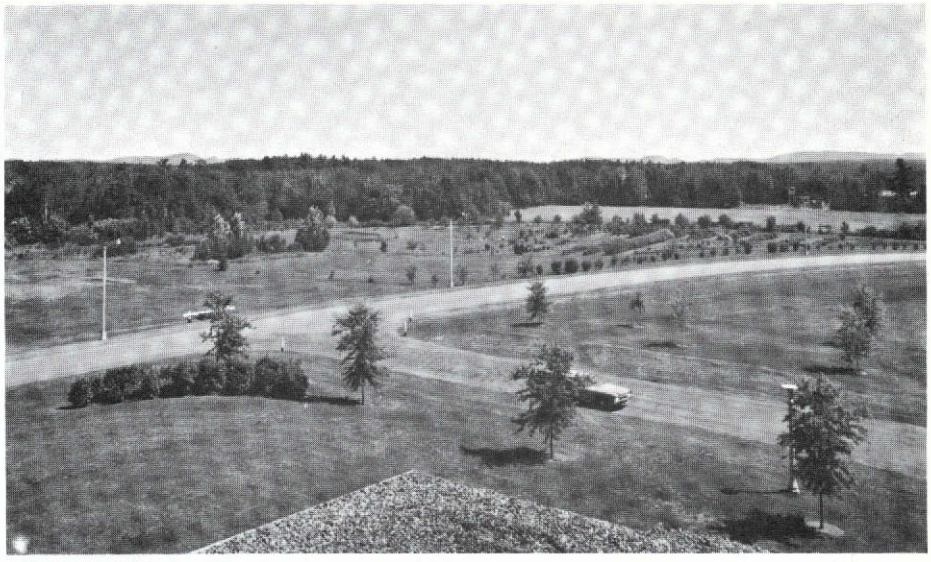


Figure 9. Photograph Taken Overlooking the Stand from a Building Roof



Figure 10. Photograph Back Over the Photo Point to Illustrate the General Stand Structure

C-2





Figure 11. Example of Accurate Relocation of Photo Scene using Target Markers

Seven shots will be taken as oblique overviews of the photo and satellite test sites. Two will be of the photo site and five of agricultural-forest land on the satellite test site areas. As already stated, these photos may be taken from towers, hills or any other convenient means of obtaining an overview of the site (Figures 12 and 13). The exact location of these photo points will be decided upon after field reconnaisance by the site and corridor coordinator. The other eight photos will be opportunity shots of the area to document whatever events the site photographer and corridor coordinator feel are of interest at the particular site location.

## VI. EXPOSURE

Correct exposure is important in obtaining quality photographs. Making an exposure up through a forest canopy with the sky as a background can give misleading light meter readings. However, with a little experience this difficulty can be overcome and photographs of proper exposure produced. If the sun is high, close to local solar noon, there will be too much contrast between the sky and the trees making the trees appear as silhouettes. This is especially true on overcast days. The best exposures are obtained approximately a few hours before or after local noon, when the sun has a smaller angle of incidence upon the trees and foliage. This angle is approximately between forty and fifty degrees from the horizon. Light meter readings under these conditions are usually reliable and good quality photography is easily obtained. All photography should be taken, if possible, with the same sun elevation above the horizon. Appendix C is a listing of the times of day at each test site when the sun angle will be between forty and fifty degrees in the morning and fifty and forty degrees in the afternoon. By interpolation, times for days inbetween those listed can be determined. Photographs taken within the listed times will have the correct sun angle.

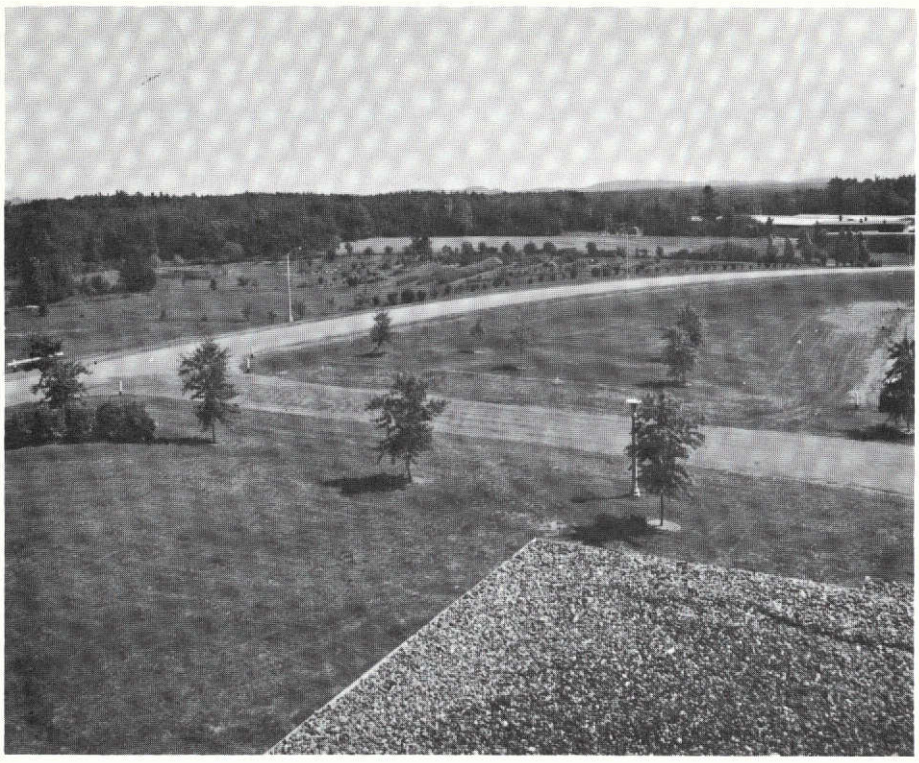
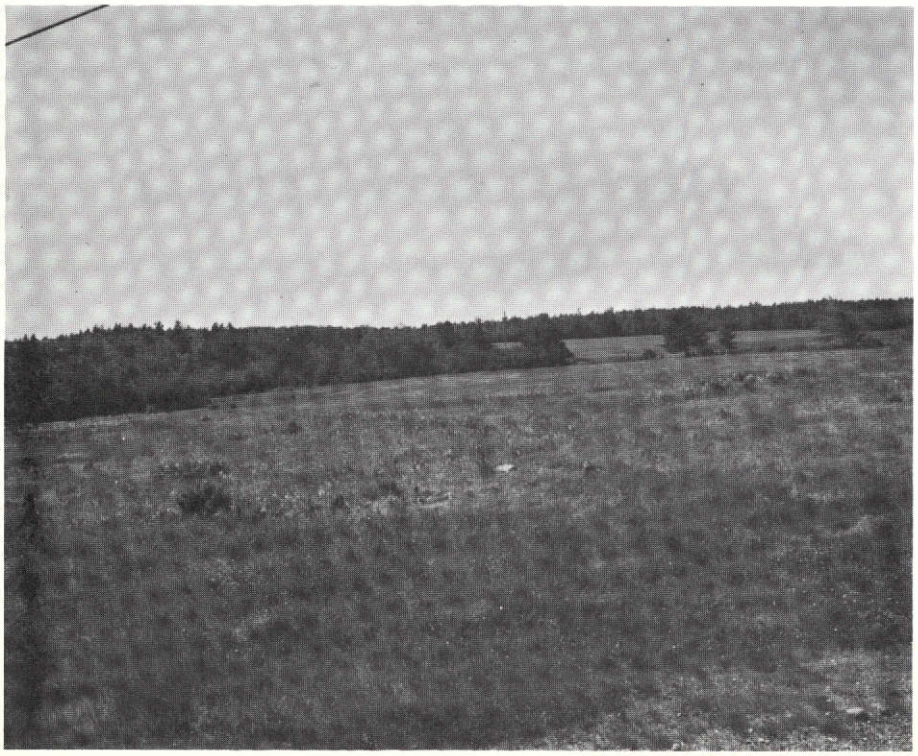


Figure 12. Photo from Overlook of Forest Stand



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Figure 13. Photo from Overlook of Agricultural Land

SATELLITE OVERPASS SCHEDULES

SCHEDULE FOR THE APPALACHIAN CORRIDOR

MAINE:

Orono (44°55'N, 68°40'W) time of overpass - 0953*
Richmond (44°07'N, 69°50'W) time of overpass - 0954

| DATE | DATE | DATE |
|---|---|---|
| Sept. 1 | Jan. 5 | May 11 |
| 19 | 23 | 29 |
| Oct. 7 | Feb. 10 | June 16 |
| 25 | 28 | July 4 |
| Nov. 12 | Mar. 18 | 22 |
| 30 | Apr. 5 | Aug. 9 |
| Dec. 18 | 23 | 27 |

VERMONT:

(44°25'N, 73°00'W) time of overpass - 1010

| DATE | DATE | DATE |
|---|---|---|
| Sept. 4 | Jan. 8 | May 14 |
| 22 | 26 | June 1 |
| Oct. 10 | Feb. 13 | 19 |
| 28 | Mar. 3 | July 7 |
| Nov. 15 | 21 | 25 |
| Dec. 23 | Apr. 8 | Aug. 12 |
| 21 | 26 | 30 |

NEW YORK:

Ithaca ( 42°27'N, 76°27'W) time of overpass - 1022

| DATE | DATE | DATE |
|---|---|---|
| Sept. 6 | Jan. 10 | May 16 |
| 24 | 28 | June 3 |
| Oct. 12 | Feb. 15 | 21 |
| 30 | Mar. 5 | July 9 |
| Nov. 17 | 23 | 27 |
| Dec. 5 | Apr. 10 | Aug. 14 |
| 23 | 28 | |

PENNSYLVANIA:

(40°46'N, 77°53'W) time of overpass - 1023

| DATE | DATE | DATE |
|---|---|---|
| Sept. 6 | Jan. 10 | May 16 |
| 24 | 28 | June 3 |
| Oct. 12 | Feb. 15 | 21 |
| 30 | Mar. 5 | July 9 |
| Nov. 17 | 23 | 27 |
| Dec. 5 | Apr. 10 | Aug. 14 |
| 23 | 28 | |

WEST VIRGINIA:

($39^{\circ}41'N$, $79^{\circ}45'W$) time of overpass - 1029

| DATE | DATE | DATE |
|---|---|---|
| Sept. 7 | Jan. 11 | May 17 |
| 25 | 29 | June 4 |
| Oct. 13 | Feb. 16 | 22 |
| 31 | Mar. 6 | July 10 |
| Nov. 18 | 24 | 28 |
| Dec. 6 | Apr. 11 | Aug. 15 |
| 24 | 29 | |

NORTH CAROLINA:

($35^{\circ}43'N$, $78^{\circ}41'W$) time of overpass - 1024

| DATE | DATE | DATE |
|---|---|---|
| Sept. 6 | Jan. 10 | May 16 |
| 24 | 28 | June 3 |
| Oct. 12 | Feb. 15 | 21 |
| 30 | Mar. 5 | July 9 |
| Nov. 17 | 23 | 27 |
| Dec. 5 | Apr. 10 | Aug. 14 |
| 23 | 28 | |

*Overpass times are in Eastern or Central Standard Time depending upon the site location.

SCHEDULE FOR THE MISSISSIPPI CORRIDOR

MICHIGAN:

($42^{\circ}40'N$, $84^{\circ}30'W$) time of overpass - 1051

| DATE | DATE | DATE |
|---|---|---|
| Sept. 11 | Jan. 15 | May 3 |
| 29 | Feb. 2 | 21 |
| Oct. 17 | 20 | June 8 |
| Nov. 4 | Mar. 10 | 26 |
| 22 | 28 | July 14 |
| Dec. 10 | Apr. 15 | Aug. 1 |
| 28 | | 19 |

INDIANA:

($40^{\circ}26'N$, $86^{\circ}51'W$) time of overpass - 0958

| DATE | DATE | DATE |
|---|---|---|
| Sept. 12 | Jan. 16 | May 4 |
| 30 | Feb. 3 | 22 |
| Oct. 18 | 21 | June 9 |
| Nov. 5 | Mar. 11 | 27 |
| 23 | 29 | July 15 |
| Dec. 11 | Apr. 16 | Aug. 2 |
| 29 | | 20 |

($38^{\circ}20'N$, $87^{\circ}40'W$) time of overpass - 0959

| DATE | DATE | DATE |
|---|---|---|
| Sept. 12 | Jan. 16 | May 4 |
| 30 | Feb. 3 | 22 |
| Oct. 18 | 21 | June 9 |
| Nov. 5 | Mar. 11 | 27 |
| 23 | 29 | July 15 |
| Dec. 11 | Apr. 16 | Aug. 2 |
| 29 | | 20 |

OKLAHOMA:

($36^{\circ}33'N$, $96^{\circ}09'W$) time of overpass - 1033

| DATE | DATE | DATE |
|---|---|---|
| Sept. 18 | Jan. 4 | May 10 |
| Oct. 6 | 22 | 28 |
| 24 | Feb. 9 | June 15 |
| Nov. 11 | 27 | July 3 |
| 29 | Mar. 17 | 21 |
| Dec. 17 | Apr. 4 | Aug. 8 |
| | 22 | 26 |

TEXAS (NORTH) COMMERCE:

(33°15'N, 95°50'W) time of overpass - 1028

| DATE | DATE | DATE |
|---|---|---|
| Sept. 17 | Jan. 3 | May 9 |
| Oct. 5 | 21 | 27 |
| 23 | Feb. 8 | June 14 |
| Nov. 10 | 26 | July 2 |
| 28 | Mar. 16 | 20 |
| Dec. 16 | Apr. 3 | Aug. 7 |
| | 21 | 25 |

TEXAS (CENTRAL) COLLEGE STATION:

(30°34'N, 96°20'W) time of overpass - 1029

| DATE | DATE | DATE |
|---|---|---|
| Sept. 17 | Jan. 3 | May 9 |
| Oct. 5 | 21 | 27 |
| 23 | Feb. 8 | June 14 |
| Nov. 10 | 26 | July 2 |
| 28 | Mar. 16 | 20 |
| Dec. 16 | Apr. 3 | Aug. 7 |
| | 21 | 25 |

MISSOURI:

(38°46'N, 92°11'W) time of overpass - 1022

| DATE | DATE | DATE |
|---|---|---|
| Sept. 16 | Jan. 2 | May 8 |
| Oct. 4 | 20 | 26 |
| 22 | Feb. 7 | June 13 |
| Nov. 9 | 25 | July 1 |
| 27 | Mar. 15 | 19 |
| Dec. 15 | Apr. 2 | Aug. 6 |
| | 20 | 24 |

TENTATIVE SCHEDULING FOR SITE PHOTOGRAPHY

Tentative Schedule of Photography for the Summer - 1973 Series in the Appalachian Corridor

| Set # | State |
|---|---|
| | Maine |
| 1 | July 4 |
| 2 | Aug. 9 |
| | Vermont |
| 1 | July 7 |
| 2 | Aug. 12 |
| | New York |
| 1 | July 9 |
| 2 | Aug. 14 |
| | Pennsylvania |
| 1 | July 9 |
| 2 | Aug. 14 |
| | West Virginia |
| 1 | July 10 |
| 2 | Aug. 15 |
| | North Carolina |
| 1 | July 9 |
| 2 | Aug. 14 |

## An Example of Scheduling Fall Site Photography

This example concerns a test site in Maine. The only difference in schedule planning for other sites will be in the dates.

Assumptions which have to be made prior to actual scheduling are:

1. The expected date of the start of fall coloration or spring bud opening. Fall coloration by definition for this experiment is considered started when 5% of the crown canopy shows a change in color. In Maine this occurs around September 15.

2. The dates of satellite overpass of the test site are taken from Appendix A. In Maine this occurs every 18 days after September 1.

One set of photography must be taken before coloration commences. In this example it would be taken on September 1 to coincide with satellite passage. If coloration reaches 5% on September 11, the next set of photos would be taken on September 13. After this, photographs will be scheduled every six days so that every third set will be taken the same date the satellite passes over the site. In this example the schedule would appear as follows:

| | | |
|---|---|---|
| Sept. | 1 | Satellite overpass prior to coloration |
| | 13 | Coloration commences to 5% or more |
| | 19 | Satellite overpass |
| | 25 | |
| Oct. | 1 | |
| | 7 | Satellite overpass |
| | 13 | |
| | 19 | |
| | 25 | |

Nine photography sessions are scheduled during leaf coloration and fall. A tenth is used to document the completion of leaf-fall. This set of photography is taken after completion of leaf-fall and should coincide with a satellite passover of the site.

Tentative Schedule of Photography for the Summer - 1973 Series in the Mississippi Corridor

| Set # | State |
|---|---|
| | Michigan |
| 1 | July 14 |
| 2 | Aug. 19 |
| | Indiana (lafayette) |
| 1 | July 15 |
| 2 | Aug. 20 |
| | Indiana (Owensville) |
| 1 | July 15 |
| 2 | Aug. 20 |
| | Missouri |
| 1 | July 19 |
| 2 | Aug. 24 |
| | Oklahoma |
| 1 | July 21 |
| 2 | Aug. 26 |
| | Texas (Commerce) |
| 1 | July 20 |
| 2 | Aug. 25 |
| | Texas (College Station) |
| 1 | July 20 |
| 2 | Aug. 25 |

STANDARD TIMES FOR SOLAR ELEVATIONS
BETWEEN FORTY AND FIFTY DEGREES

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Standard Times for Solar Elevations Between Forty and Fifty Degrees
SCHEDULE FOR APPALACHIAN CORRIDOR

| DATE | | MAINE | VERMONT | NEW YORK | PENNSYLVANIA | WEST VIRGINIA | NORTH CAROLINA |
|---|---|---|---|---|---|---|---|
| MARCH | 1 | max. sun angle 36° at 11:40 | max. sun angle 36° at 11:52 | 1119-1204<br>1204-1249 | 1112-1212<br>1212-1312 | 1120-1220<br>1220-1320 | 1030-1220<br>1220-1410 |
| MARCH | 15 | 1040-1140<br>1140-1240 | 1052-1152<br>1152-1252 | 1034-1204<br>1204-1334 | 1012-1212<br>1212-1412 | 1020-1220<br>1220-1420 | 1005-1120<br>1320-1435 |
| APRIL | 15 | 0855-1010<br>1310-1415 | 0907-1022<br>1322-1427 | 0906-1006<br>1359-1459 | 0912-1012<br>1412-1512 | 0920-1020<br>1420-1520 | 0905-1005<br>1435-1535 |
| MAY | 15 | 0810-0910<br>1400-1500 | 0882-0922<br>1412-1512 | 0834-0934<br>1434-1534 | 0842-0942<br>1442-1542 | 0850-0950<br>1450-1550 | 0840-0930<br>1500-1600 |
| JUNE | 15 | 0755-0855<br>1410-1530 | 0807-0907<br>1422-1542 | 0824-0919<br>1449-1544 | 0832-0922<br>1457-1552 | 0840-0930<br>1450-1610 | 0830-0920<br>1510-1605 |
| JUNE | 22 | 0750-0850<br>1415-1515 | 0802-0902<br>1427-1527 | 0819-0909<br>1454-1549 | 0825-0917<br>1502-1557 | 0833-0925<br>1510-1605 | 0830-0920<br>1510-1605 |
| JULY | 1 | 0755-0855<br>1410-1530 | 0807-0907<br>1422-1542 | 0824-0919<br>1449-1544 | 0832-0922<br>1457-1552 | 0840-0930<br>1450-1610 | 0830-0920<br>1510-1605 |
| AUGUST | 1 | 0810-0910<br>1400-1500 | 0822-0922<br>1412-1512 | 0834-0934<br>1434-1534 | 0842-0942<br>1442-1542 | 0850-0950<br>1415-1550 | 0840-0930<br>1500-1600 |
| SEPTEMBER | 1 | 0855-1010<br>1300-1420 | 0907-1022<br>1312-1432 | 0906-1006<br>1349-1459 | 0912-1012<br>1412-1512 | 0920-1020<br>1420-1520 | 0905-1005<br>1435-1535 |
| OCTOBER | 1 | 1040-1140<br>1140-1240 | 1052-1152<br>1152-1252 | 1034-1204<br>1204-1334 | 1012-1212<br>1212-1412 | 1020-1220<br>1220-1420 | 1005-1120<br>1320-1435 |
| OCTOBER | 7 | max. sun angle 40° at 11:40 | max. sun angle 40° at 11:52 | 1044-1204<br>1204-1324 | 1042-1212<br>1212-1342 | 1050-1220<br>1220-1350 | 1010-1220<br>1220-1425 |
| OCTOBER | 14 | max. sun angle 36° at 11:40 | max. sun angle 36° at 11:52 | 1119-1204<br>1204-1249 | 1112-1212<br>1212-1312 | 1120-1220<br>1220-1320 | 1030-1220<br>1220-1410 |

NOTES: 1. Add one hour to listed times to correct standard times to Daylight Savings Times.
2. An example of table use is shown on the following page.

Standard Times for Solar Elevations Between Forty and Fifty Degrees
SCHEDULE FOR MISSISSIPPI CORRIDOR

| DATE | | MICHIGAN | INDIANA (LAF) | INDIANA (OWB) | MISSOURI | OKLAHOMA (NE) | TEXAS (COM) | TEXAS (CSTA) |
|---|---|---|---|---|---|---|---|---|
| MARCH | 1 | sun angle 40° at 12:36 | 1048-1148<br>1148-1230 | 1037-1152<br>1152-1307 | 1108-1208<br>1208-1308 | 1039-1224<br>1224-1409 | 1029-1224<br>1224-1409 | 1009-1224<br>1224-1439 |
| MARCH | 7 | 1136-1236<br>1236-1336 | 1013-1148<br>1148-1323 | 1002-1152<br>1152-1337 | 1028-1208<br>1208-1338 | 1014-1224<br>1224-1429 | 0909-1154<br>1254-1439 | 0959-1124<br>1324-1449 |
| APRIL | 15 | 0941-1056<br>1411-1526 | 0848-0948<br>1348-1448 | 0837-0947<br>1352-1452 | 0908-1008<br>1408-1508 | 0914-1009<br>1434-1534 | 0914-1009<br>1434-1534 | 0909-1004<br>1444-1534 |
| MAY | 15 | 0905-1001<br>1506-1601 | 0818-0908<br>1423-1518 | 0817-0912<br>1432-1527 | 0838-0938<br>1438-1538 | 0844-0934<br>1504-1604 | 0844-0939<br>1459-1559 | 0849-0934<br>1509-1559 |
| JUNE | 15 | 0851-0946<br>1521-1621 | 0803-0858<br>1433-1528 | 0807-0857<br>1447-1537 | 0823-0918<br>1458-1553 | 0839-0934<br>1514-1604 | 0839-0929<br>1509-1604 | 0844-0934<br>1514-1604 |
| JUNE | 22 | 0846-0941<br>1521-1621 | 0803-0858<br>1438-1533 | 0802-0857<br>1442-1537 | 0820-0915<br>1500-1600 | 0839-0934<br>1514-1604 | 0834-0924<br>1514-1609 | 0844-0934<br>1514-1604 |
| JULY | 1 | 0851-0946<br>1521-1621 | 0803-0858<br>1433-1528 | 0807-0857<br>1447-1527 | 0823-0918<br>1458-1553 | 0839-0934<br>1514-1604 | 0839-0929<br>1509-1604 | 0844-0934<br>1514-1604 |
| AUGUST | 1 | 0906-1001<br>1506-1601 | 0818-0908<br>1423-1518 | 0817-0912<br>1432-1527 | 0838-0938<br>1438-1538 | 0844-0934<br>1504-1604 | 0844-0939<br>1459-1559 | 0849-0934<br>1509-1559 |
| SEPTEMBER | 1 | 0941-1056<br>1411-1526 | 0848-0948<br>1348-1448 | 0837-0947<br>1352-1452 | 0908-1008<br>1408-1508 | 0914-1009<br>1434-1534 | 0914-1009<br>1434-1534 | 0904-1004<br>1444-1534 |
| OCTOBER | 1 | 1056-1236<br>1236-1356 | 0948-1148<br>1148-1348 | 0947-1152<br>1152-1357 | 1008-1208<br>1208-1408 | 1004-1124<br>1324-1439 | 0954-1149<br>1324-1449 | 0944-1054<br>1354-1504 |
| OCTOBER | 7 | 1136-1236<br>1236-1336 | 1013-1148<br>1148-1323 | 1002-1152<br>1152-1337 | 1028-1208<br>1208-1338 | 1014-1224<br>1224-1429 | 0909-1154<br>1254-1439 | 0954-1124<br>1324-1449 |
| OCTOBER | 14 | sun angle 40° at 12:36 | 1048-1148<br>1148-1230 | 1037-1152<br>1152-1307 | 1108-1208<br>1208-1308 | 1039-1224<br>1224-1409 | 1029-1224<br>1224-1409 | 1009-1224<br>1224-1429 |

NOTES: 1. Add one hour to listed times to correct standard times to Daylight Savings Times.

2. An example of table use is shown on the following page.

## How to Use the Solar Elevation Tables

In the following calculations a 30 day month is assumed.

Step 1. Find the two dates between which you plan to take photographs. For example, if the desired date was September 14, it would fall between September 1 and October 1. If the test site was in Maine, the times from the table for these two dates would be:

| | AM | PM |
|---|---|---|
| September 1 | 0855-1010 | 1300-1420 |
| October 1 | 1040-1140 | 1140-1240 |

Step 2. Find the differences between the corresponding times in minutes, and the difference in days between the desired date and the first date listed (September 1).

September 1 - September 13 = -13 days

0855-1040 = -105 min.
1010-1140 = - 90 min.
1300-1140 = 80 min.
1420-1240 = 100 min.

Step 3. To find the number of minutes that have to be added or subtracted from the September 1 times, a proportion using the number of days is set up. This assumes a linear relationship between the change in times and the number of days.

$$\frac{-13 \text{ days}}{30 \text{ days}} = \frac{A \text{ min.}}{-105 \text{ min.}} = \frac{B \text{ min.}}{-90 \text{ min.}} = \frac{C \text{ min.}}{80 \text{ min.}} = \frac{D \text{ min.}}{100 \text{ min.}}$$

A = 45.5 min.
B = 39 min.
C = -34.6 min.
D = -43.3 min.

Step 4. Apply the calculated corrections to the times for September 1 taking into consideration the algebraic sign.

0855 + 46 min. = 0941
1010 + 39 min. = 1049
1300 - 35 min. = 1225
1420 - 44 min. = 1336

| | AM | PM |
|---|---|---|
| September 14 | 0941-1049 | 1225-1336 |

Step 5. If Daylight Savings Time is in effect, add one hour to the corrected times.

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# APPENDIX D

## FIELD GUIDE FOR GROUND OBSERVATIONS
## WESTERN REGION



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# FIELD GUIDE
# FOR
# GROUND OBSERVATIONS
# (Western Region)

Joseph M. Caprio, Denis R. Bourdeau
and Laurence Lancaster

## I. INTRODUCTION

For centuries man has realized that there is a relationship between climate and the seasonal occurrences of leaves, flowers, birds, etc. The Romans and Chinese had phenological calendars to aid farmers in planting and harvesting at the proper times. Up until now, however, these observations have been limited to generally local observations. With the launch of NASA's ERTS-1 satellite, it will be possible to record phenological events over the entire surface of the earth and to study plant-climate relations on a regional or even a world-wide scale.

As part of the Phenology Satellite Experiment, ground-based photographs of the earth's surface will be taken to give a basis for interpreting the satellite imagery. To be useful, these ground photographs must be taken following certain procedures. This field guide will hopefully set forth standardized procedures which will give comparable and compatable data for the photographs taken at different times in many different experimental areas.

The procedures as outlined in this guide were developed during 1972 at the Montana Agricultural Experiment Station and apply specifically for areas devoid of continuous forest canopy. Thus, these methods are applicable for sites where the predominate vegetative cover is grass, hedges, shrubs and other low plant cover.

## II. EQUIPMENT

The following equipment will be required at each of the 6 experimental areas in the Rocky Mountain Corridor and the 4 experimental areas in the Columbia Valley Corridor in order to take the necessary photographs.

A. Camera*. A Minolta Hi-matic 7s 35 millimeter automatic black camera (Fig. 1) is used at all experimental areas. This camera has 45mm lens and 1.8 focal length. The "depth of field" setting is the only adjustment made before the picture is taken. Only two "depth of field" settings will be required in this work, infinity (∞) and 10 feet. These cameras have been purchased from a common supplier.

B. Base pipe, stand and camera plate. Since the series of photographs will be taken over a long period of time and each sequential photograph should have exactly the same view, some permanent fixture must be installed in the field. A 1 1/4" inside diameter, 3' long galvanized pipe (Fig. 2) will be placed in a vertical position in the ground at each site with the top protruding 2 or 3 inches above the soil surface. This base pipe for the camera stand will be held firmly in place by embedding it in a 7" diameter cylinder of concrete. This base pipe will receive the lower two-foot length of the 6' long camera stand. A screw cap is kept on the base pipe between observations. Threads on the pipe should be kept oiled.

The camera stand (Fig. 3) consists of a 6' long, 1" inside diameter pipe with a flat 7 1/4" X 7 1/4" square aluminum platform on top. Four prongs which are 3 5/16" long and 3/8" in diameter project from the platform. The top of the platform is painted flat black. This stand is inserted into the base pipe, which is set in the ground, when photographs are to be taken. The thumbscrew near the top of the ground pipe should be tightened by hand (do not use a wrench or pliers) before taking pictures. The stand has only two fixed positions in the base pipe which are determined by notches on its lower end which saddle a bolt that goes through the base pipe 2' below the

*Special precaution should be taken when removing exposed film from the camera. Turn film rewind crank only in the direction indicated by the arrow engraved on the crank. Push film rewind button up before rewinding.

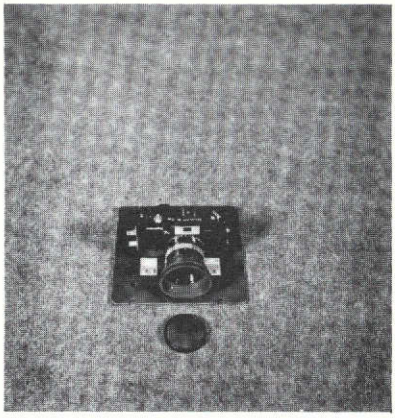


Figure 1. Camera used.

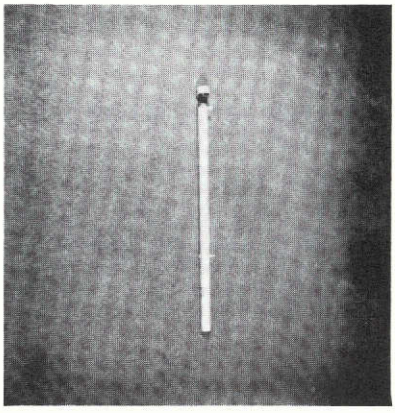


Figure 2. Base pipe for camera stand.

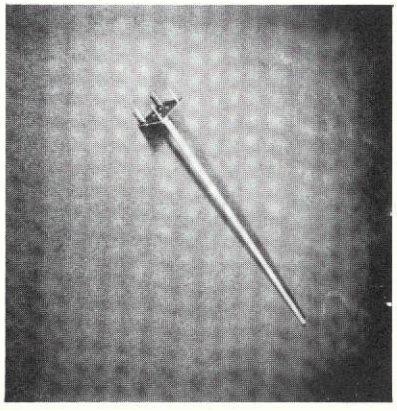


Figure 3. Camera stand.

soil surface. Compass directions are stamped on the platform of the stand. The stand must be inserted so that its compass directions are correct.

The camera is permanently mounted on an 8 inch by 8 inch aluminum plate which has been painted flat black on the upper surface. Two holes are drilled in the plate near the center to allow access to replace the battery and to push the film rewind button. Four holes in the corners of the plate are for mounting on the four prongs which project from the camera stand. The holes are located 2" in on the diagonal.

C. Film. Color transparency film, which shows more detail than black and white film, will be used. Rolls of 20 frames of Ektachrome X (ASA 64, 19 DIN) will be supplied by Montana State University. These rolls of film have a common emulsion base. Film will be kept in cold storage before it is sent to observers and the returned exposed film will be kept in cold storage until it is developed. All film will be numbered and the observer should use the film in numerical sequence.

## III. LOCATION OF EXPERIMENTAL AREAS AND OBSERVATION SITES

The general locations for all six experimental areas in the Rocky Mountain Corridor were chosen so that they are: (1) well spaced across the entire north-south extent of the corridor and (2) located in relatively flat terrain where the elevation averages about 4,800 feet.

The four experimental areas in the Columbia Valley Corridor were chosen so that they are: (1) well spaced across the entire east-west extent of the corridor and (2) located in relatively flat terrain where the elevation averages about 3,000 feet.

A. Sites within Experimental Areas. Each experimental area includes the following three sites:

1. A site which is typical of the surrounding non-irrigated rangeland. The predominate vegetative corner in the experimental area will usually consist of non-irrigated rangeland.
2. A site where a non-irrigated cultivated crop is grown (usually winter wheat). This will normally be a relatively small acreage surrounded by extensive non-irrigated rangeland. Photographs are usually taken at a place along the edge of the field, often in line with a fence. Weeds in the fence line which obstruct the view of the crop should be removed.
3. A site where an irrigated perennial crop is grown (usually alfalfa). This will normally be a relatively small acreage surrounded by extensive non-irrigated rangeland. Pictures are usually taken at a place along the edge of the field, often in line with a fence. Weeds in the fence line which obstruct the view of the crop should be removed.

B. Ease of Access. Each of the three observation sites in every experimental area should be near a road or path to facilitate access with the required equipment.

C. Alternate Sites. Because of the possibility of an experimental area being clouded over on the day of the satellite coverage, alternate areas may be designated that are similar, but far enough to the east or west of the primary experimental area to be covered by the orbit of the preceding or following day.

## IV. SCHEDULING OF PHOTOGRAPHS

To be meaningful, ground-observation photographs must be taken at and near the same time that the satellite obtains its imagery. The ERTS-1 satellite will cover the same point on the earth's surface every 18 days, and ground photographs will be taken every 6 days. A schedule of coverage for each site has been tabulated for each site and is included as Appendix A. The orbit design is such that the satellite will cover adjacent Polar oriented (approximately north-south) strips of land (moving in a westerly direction) on consecutive days.

Another parameter of the ERTS-1 orbit is that it will cover the same location at the same time of day every 18th day. This is to provide a constant sun angle making interpretation easier. The sun angle should also be the same for the ground-observation photographs.

Photographs are to be taken every 6 days, except during a period in mid-winter. Photographs are not to be taken when it is raining or snowing or when the ground is completely covered with snow.

The preferred time to take photographs is from about 11 a.m. to 12 noon. One should park his automobile at least 100' away from the site and preferably in the same location each time. If the car is parked too close, it will occupy a large portion of some of the photographs.

If photographs cannot be taken on the scheduled date, they should be taken the preceding or following day. If photographs cannot be taken for two days in a row, they should be taken on the third day.

## V. SETTING UP CAMERA STAND

The camera stand base consists of a 3-foot long pipe embedded in the soil in a 7-inch diameter core of concrete. The base pipe projects about two or three inches above the soil surface and is topped by a screw-on cap. Two feet below the top of the base, a bolt is fitted across the pipe. The 6-foot long stand is inserted in the base. Two notches located at the bottom of the stand saddle over the bolt in the base. Thus, pictures are taken from a height of slightly more than 4 feet (Fig. 4).

The procedure for properly placing the stand in the mount is as follows:

1. Remove the cap from the base pipe.
2. Check to see that thumb-screw near top of mount will not interfer with insertion of the stand.
3. Gently insert stand into base so that the notches of the stand saddle over the bolt in the base with the "N" (for north) on the stand plate located on the north side.
4. Tighten the thumb-screw by hand so that the stand fits snugly against the base. (Do not use tools such as pliers, etc. to tighten thumb screw.)
5. For horizontal photographs, position camera plate so that the four corner holes are over the four prongs in the stand. Keep index fingers between stand plate and camera plate while lowering camera plate into position (Fig. 5).

   For 30 degree ground angle photographs, place notches in front of camera plate on the two front prongs of stand and slide down until plate rests on the two nuts at the bottom of the prongs. The rear of the camera plate will rest on the two rear prongs (Fig. 6).

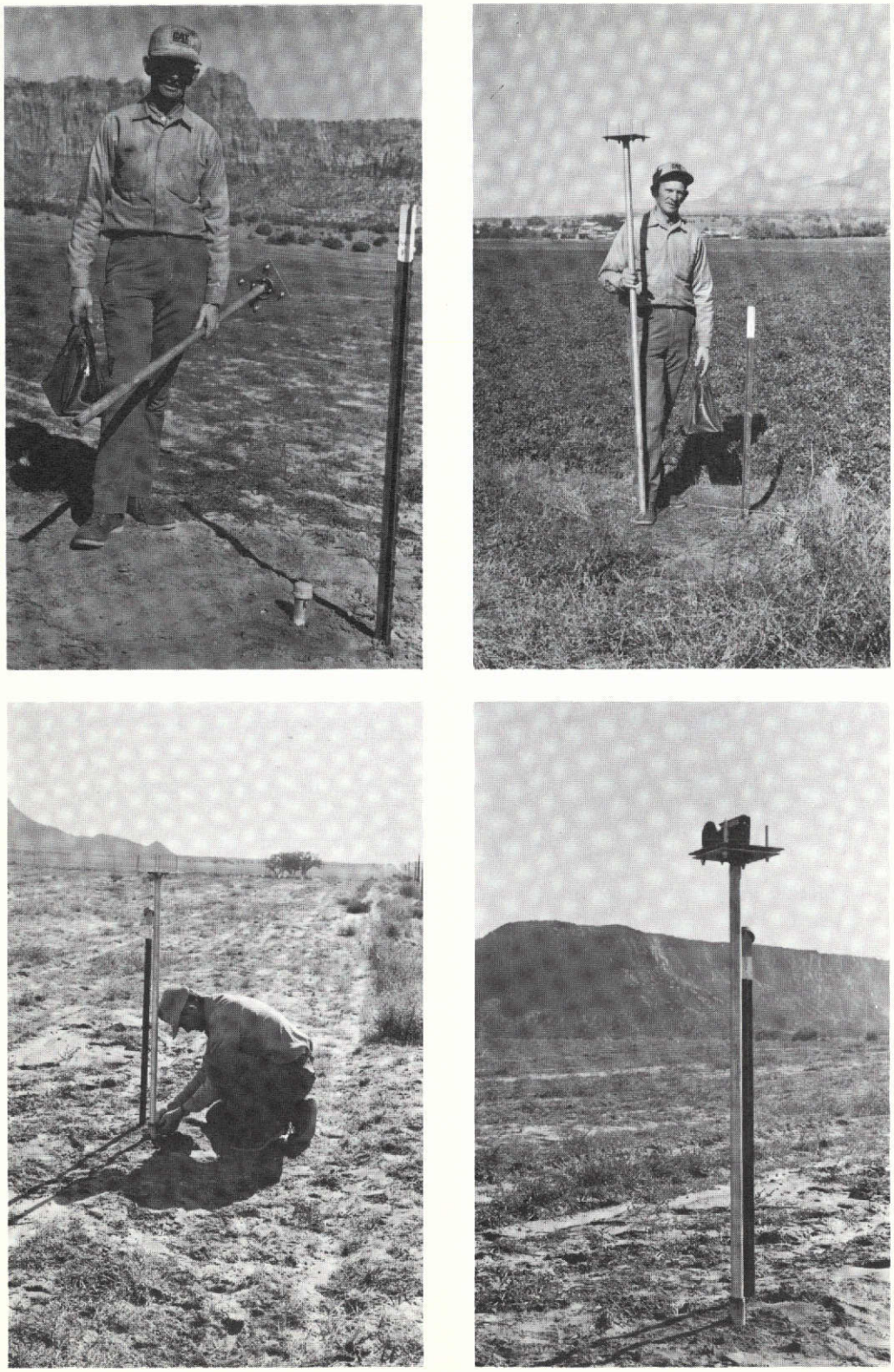


Figure 4 a-d. Setting up camera stand

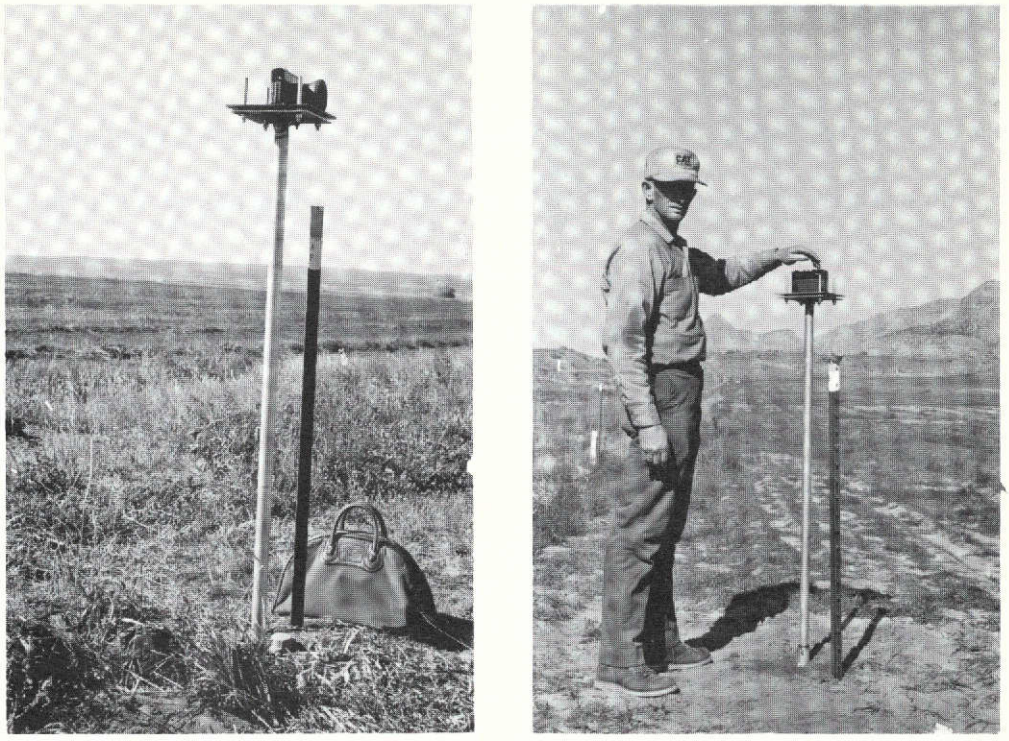


Figure 5 a-b. Setting up for horizontal photographs



Figure 6 a-b. Set up for 30° ground angle photographs

6. Before taking picture, push gently forward on camera plate to take up any play that might exist.
7. Place left hand on camera stand exerting slight downward pressure while index finger of right hand presses slowly down on shutter release button. This will help to steady the stand, especially when it is windy.

## VI. CAMERA SETTINGS

The film used in this experiment has a film speed rating of ASA 64, 19 DIN. This setting is made on the camera before it is delivered to the observer.

The camera is completely automatic except for "depth of field" setting. The alignment of the two "A" marks on the camera indicate that the camera is set for automatic.

No settings must be made by the observer except for "depth of field". The ring nearest the main body of the camera has to be set for the proper "depth of field" reading*. (Read scale on right side, which is in feet.)

1. For all horizontal photographs the infinity sign (∞) should be opposite the white mark.
2. For all 30 degree ground angle photographs the zero (0) of the number 10 is opposite the white mark.

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*A good to fair photograph results even if "depth of field" adjustment is not changed. Should a photograph be taken with a wrong setting, do not become concerned but continue taking the remaining pictures at the proper "depth of field" setting.

VII. SEQUENCE OF PHOTOGRAPHS

The following photographs are taken in the sequence indicated at three sites in each experimental area*.

A. Rangeland Area (total of 8 pictures)

1. A horizontal photograph in each of the 4 compass directions
2. A 30 degree ground angle photograph in each of the 4 compass directions.

Three honeysuckles have been planted at each range site. These are planted in a line 18 inches apart and 7 1/2 feet away from the base, usually on the south side. The subsoil for a distance of one foot surrounding the plants should be kept moist by applying water immediately after the pictures at the range site are taken. Do not wet the soil beyond this distance from the plants. Frequency of irrigation will depend on weather conditions. A reasonable amount to apply is 2 or 3 gallons at each irrigation. Vegetation which might shade the plants or block view of the plants from the camera should be removed.

It is best to follow the same path when walking to each site. Approach to the range site should be from the side where the honeysuckles are planted (usually on the south side).

B. Dryland Crop Area (usually winter wheat; total of 6 pictures)

1. A horizontal photograph in each of the 4 compass directions.
2. a 30 degree ground angle photograph in the two compass directions which point most directly into the field. Give preference

*If this sequence requires additional travel, then try to keep "a" first but reverse "b" and "c".

to the north direction if one of these directions aligns very closely with the edge of the field.

C. Irrigated crop area (usually alfalfa; total of 6 pictures)

1. A horizontal photograph in each of the 4 compass directions.
2. A 30 degree ground angle photograph in the two compass directions which point most directly into the field. Give preference to the north direction if one of these directions aligns very closely with the edge of field.

The four horizontal photographs at each of the three sites in the experimental area are always taken in the following sequence: north (N), east (E), south (S), west (W) (that is, clockwise starting with direction to the north).

The four 30 degree ground angle photographs at the range site are always taken in the following sequence: north (N), east (E), south (S), west (W) (that is, clockwise starting with direction to the north).

The two 30 degree ground angle photographs at the dryland and irrigated crop sites are always in adjacent compass directions. The sequence should always be in a clockwise direction. Thus, the following combinations and sequences will be applicable, depending on the particular site: north then east, east then south, south then west, west then north.

## VIII. PROCEDURE FOR TAKING PHOTOGRAPHS

1. Remove film from refrigerator (not deep freeze) or other cool storage the day before taking photographs, if possible.

2. Load camera in a shaded area on the same day that pictures are to be taken. Return camera to closed bag after film is loaded. Use lens brush to clean lens, if available.
3. Carry camera in the bag to first site and between each site. The bag and camera should be carried on the floor of the car rather than on a seat where it might fall.
4. To take horizontal pictures the aluminum plate holding the camera is fitted on the stand into any of the four compass directions. The aluminum plate has two notches on one side. To take 30 degree ground angle pictures these notches are fitted against the front two prongs and rest on the top of the nuts on the lower end of the prongs while the rear part of the plate rests on the top of the two rear prongs.
5. Remove lens cover at first site and leave lens cover off until all photographs for that day have been taken. Carry camera in closed zippered bag between sites.
6. Take photographs in the same sequence on each day. Return lens cover after all photographs are taken and set "depth of field" to infinity (∞).
7. Remove film from camera in a shaded area immediately after taking the photographs and mail in the envelope provided to the following address at your earliest opportunity.

    Phenology Satellite Experiment
    Plant and Soil Science Department
    Montana State University
    Bozeman, Montana 59715

Be sure your return address is on the envelope in which the film is mailed. Also be sure to enclose the completed film identification form with each film.

8. Immediately return camera to bag such that the direction of the camera is parallel to the bag's longest length and then zippered tight*.

9. Do not carry anything in the camera bag that would produce dust and lint or which is greasy or oily.

10. Keep camera and stand in a safe place. Never leave the camera on the stand when you are carrying the stand from site to site or during the period between observations. The stand is subject to rust so it should not be left out of doors.

*Warning: If lens cover is not replaced on camera and camera is not returned to zippered bag after use, the battery which operates the automatic features of the camera will run down faster.

SATELLITE OVERPASS SCHEDULE AND TENTATIVE SCHEDULE

FOR SITE PHOTOGRAPHY

*Actual Overpass Date

Montana:

Browning (48°44'N, 113°11'W) Time of Overpass ∿ 1056 LST

| Date | Date |
|---|---|
| November 2, 8*, 14, 20, 26* | June 6, 12*, 18, 24, 30* |
| December 2, 8, 14*, 20, 26 | July 6, 12, 18*, 24, 30 |
| January 1*, 7, 13, 19*, 25, 31 | August 5*, 11, 17, 23*, 29 |
| February 6*, 12, 18, 24* | September 4, 10*, 16, 22, 28* |
| March 2, 8, 14*, 20, 26 | October 4, 10, 16*, 22, 28 |
| April 1*, 7, 13, 19*, 25 | November 3* |
| May 1, 7*, 13, 19, 25*, 31 | |

Montana:

Logan (45°47'N, 111°27'W) Time of Overpass ∿ 1045 LST

| Date | Date |
|---|---|
| October 31 | May 5*, 11, 17, 23*, 29 |
| November 6*, 12, 18, 24*, 30 | June 4, 10*, 16, 22, 28* |
| December 6, 12*, 18, 24, 30* | July 4, 10, 16*, 22, 28 |
| January 5, 11, 17*, 23, 29 | August 3*, 9, 15, 21*, 27 |
| February 4*, 10, 16, 22*, 28 | September 2, 8*, 14, 20, 26* |
| March 6, 12*, 18, 24, 30* | October 2, 8, 14*, 20, 26 |
| April 5, 11, 17*, 23, 29 | November 1* |

Idaho:

Camas (43°58'N, 112°18'W) Time of Overpass ∿ 1046 LST

| Date | Date |
|---|---|
| October 31 | May 5*, 11, 17, 23*, 29 |
| November 6*, 12, 18, 24*, 30 | June 4, 10*, 16, 22, 28* |
| December 6, 12*, 18, 24, 30* | July 4, 10, 16*, 22, 28 |
| January 5, 11, 17*, 23, 29 | August 3*, 9, 15, 21*, 27 |
| February 4*, 10, 16, 22*, 28 | September 2, 8*, 14, 20, 26* |
| March 6, 12*, 18, 24, 30* | October 2, 8, 14*, 20, 26 |
| April 5, 11, 17*, 23, 29 | November 1* |

Utah:

Snowville (41°59'N, 112°39'W) Time of Overpass ∿ 1047 LST

| Date | Date |
|---|---|
| October 31 | May 5*, 11, 17, 23*, 29 |
| November 6*, 12, 18, 24*, 30 | June 4, 10*, 16, 22, 28* |
| December 6, 12*, 18, 24, 30* | July 4, 10, 16*, 22, 28 |
| January 5, 11, 17*, 23, 29 | August 3*, 9, 15, 21*, 27 |
| February 4*, 10, 16, 22*, 28 | September 2, 8*, 14, 20, 26* |
| March 6, 12*, 18, 24, 30* | October 2, 8, 14*, 20, 26 |
| April 5, 11, 17*, 23, 29 | November 1* |

ROCKY MOUNTAIN CORRIDOR

*Actual Overpass Date

Utah:

Kanosh (38°49'N, 112°33'W)

| Date |
|---|
| October 30 |
| November 5*, 11, 17, 23*, 29 |
| December 5, 11*, 17, 23, 29* |
| January 4, 10, 16*, 22, 28 |
| February 3*, 9, 15, 21*, 27 |
| March 5, 11*, 17, 23, 29* |
| April 4, 10, 16*, 22, 28 |

Time of Overpass ∿ 1041 LST

| Date |
|---|
| May 4*, 10, 16, 22*, 28 |
| June 3, 9*, 15, 21, 27* |
| July 3, 9, 15*, 21, 27 |
| August 2*, 8, 14, 20*, 26 |
| September 1, 7*, 13, 19, 25* |
| October 1, 7, 13*, 19, 25, 31* |

Arizona:

Colorado City (36°59'N, 112°59'W)

| Date |
|---|
| October 30 |
| November 5*, 11, 17, 23*, 29 |
| December 5, 11*, 17, 23, 29* |
| January 4, 10, 16*, 22, 28 |
| February 3*, 9, 15, 21*, 27 |
| March 5, 11*, 17, 23, 29* |
| April 4, 10, 16*, 22, 28 |

Time of Overpass ∿ 1030 LST

| Date |
|---|
| May 4*, 10, 16, 22*, 28 |
| June 3, 9*, 15, 21, 27* |
| July 3, 9, 15*, 21, 27 |
| August 2*, 8, 14, 20*, 26 |
| September 1, 7*, 13, 19, 25* |
| October 1, 7, 13*, 19, 25, 31* |

COLUMBIA CORRIDOR

*Actual Overpass Date

Montana:

Havre (48°27'N, 109°47'W) Time of Overpass ∿ 1045 LST

| Date | Date |
|---|---|
| October 31 | May 5*, 11, 17, 23*, 29 |
| November 6*, 12, 18, 24*, 30 | June 4, 10*, 16, 22, 28* |
| December 6, 12*, 18, 24, 30* | July 4, 10, 16*, 22, 28 |
| January 5, 11, 17*, 23, 29 | August 3*, 9, 15, 21*, 27 |
| February 4*, 10, 16, 22*, 28 | September 2, 8*, 14, 20, 26* |
| March 6, 12*, 18, 24, 30* | October 2, 8, 14*, 20, 26 |
| April 5, 11, 17*, 23, 29 | November 1* |

Montana:

Charlo (47°27'N, 114°09'W) Time of Overpass ∿ 1056 LST

| Date | Date |
|---|---|
| November 3, 9*, 15, 21, 27* | June 1, 7, 13*, 19, 25 |
| December 3, 9, 15*, 21, 27 | July 1*, 7, 13, 19*, 25, 31 |
| January 2*, 8, 14, 20*, 26 | August 6*, 12, 18, 24*, 30 |
| February 1, 7*, 13, 19, 25* | September 5, 11*, 17, 23, 29* |
| March 3, 9, 15*, 21, 27 | October 5, 11, 17*, 23, 29 |
| April 2*, 8, 14, 20*, 26 | November 4* |
| May 2, 8*, 14, 20, 26* | |

Idaho:

Helmer (46°50'N, 116°27'W) Time of Overpass ∿ 1002 LST

| Date | Date |
|---|---|
| November 4, 10*, 16, 22, 28* | June 2, 8, 14*, 20, 26 |
| December 4, 10, 16*, 22, 28 | July 2*, 8, 14, 20*, 26 |
| January 3*, 9, 15, 21*, 27 | August 1, 7*, 13, 19, 25*, 31 |
| February 2, 8*, 14, 20, 26* | September 6, 12*, 18, 24, 30* |
| March 4, 10, 16*, 22, 28 | October 6, 12, 18*, 24, 30 |
| April 3*, 9, 15, 21*, 27 | November 5* |
| May 3, 9*, 15, 21, 27* | |

Washington:

Bickleton (46°03'N, 120°13'W) Time of Overpass ∿ 1019 LST

| Date | Date |
|---|---|
| October 31 | May 5, 11*, 17, 23, 29* |
| November 6, 12*, 18, 24, 30* | June 4, 10, 16*, 22, 28 |
| December 6, 12, 18*, 24, 30 | July 4*, 10, 16, 22*, 28 |
| January 5*, 11, 17, 23*, 29 | August 3, 9*, 15, 21, 27* |
| February 4, 10*, 16, 22, 28* | September 2, 8, 14*, 20, 26 |
| March 6, 12, 18*, 24, 30 | October 2*, 8, 14, 20*, 26 |
| April 5*, 11, 17, 23*, 29 | November 1, 7* |

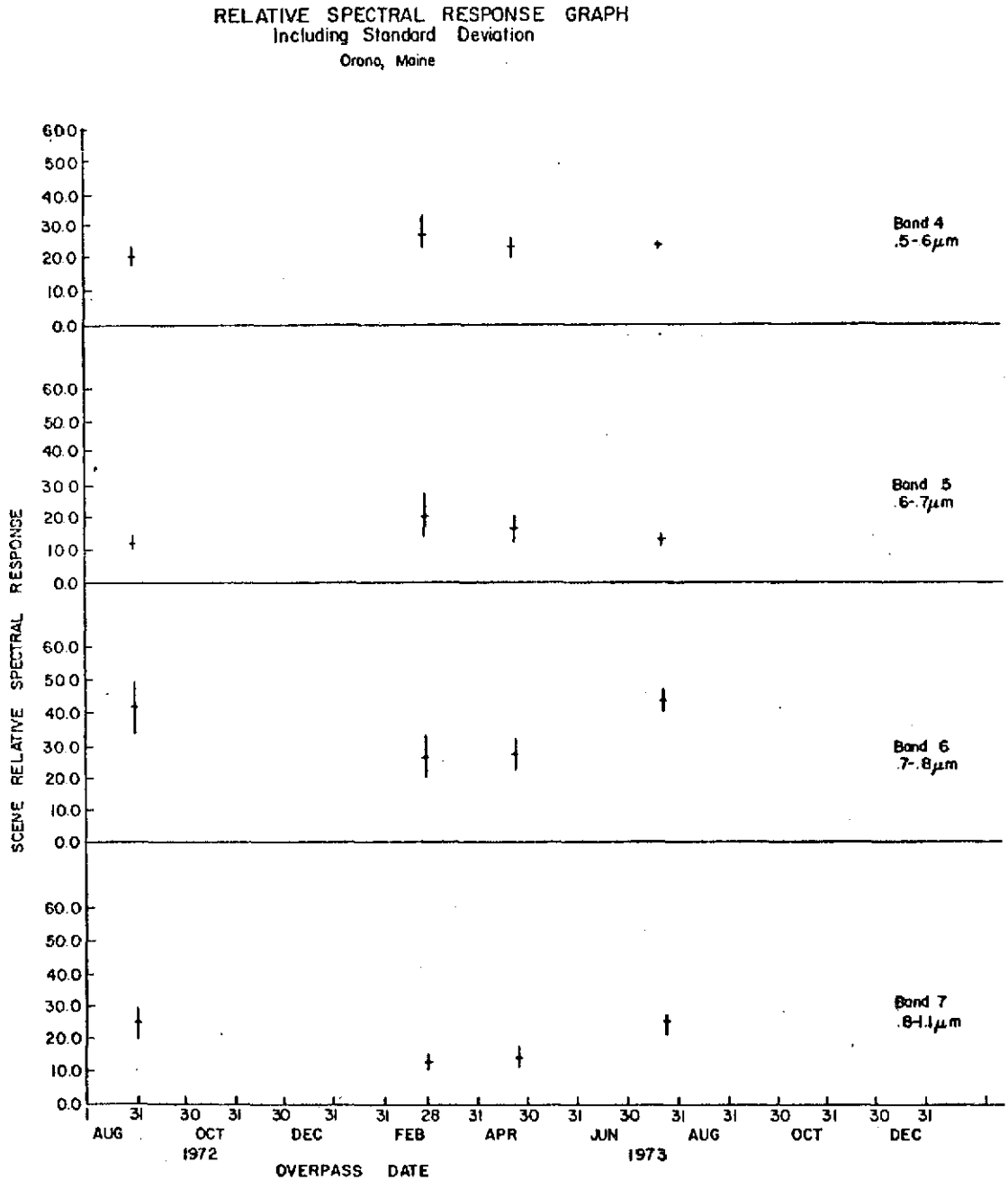
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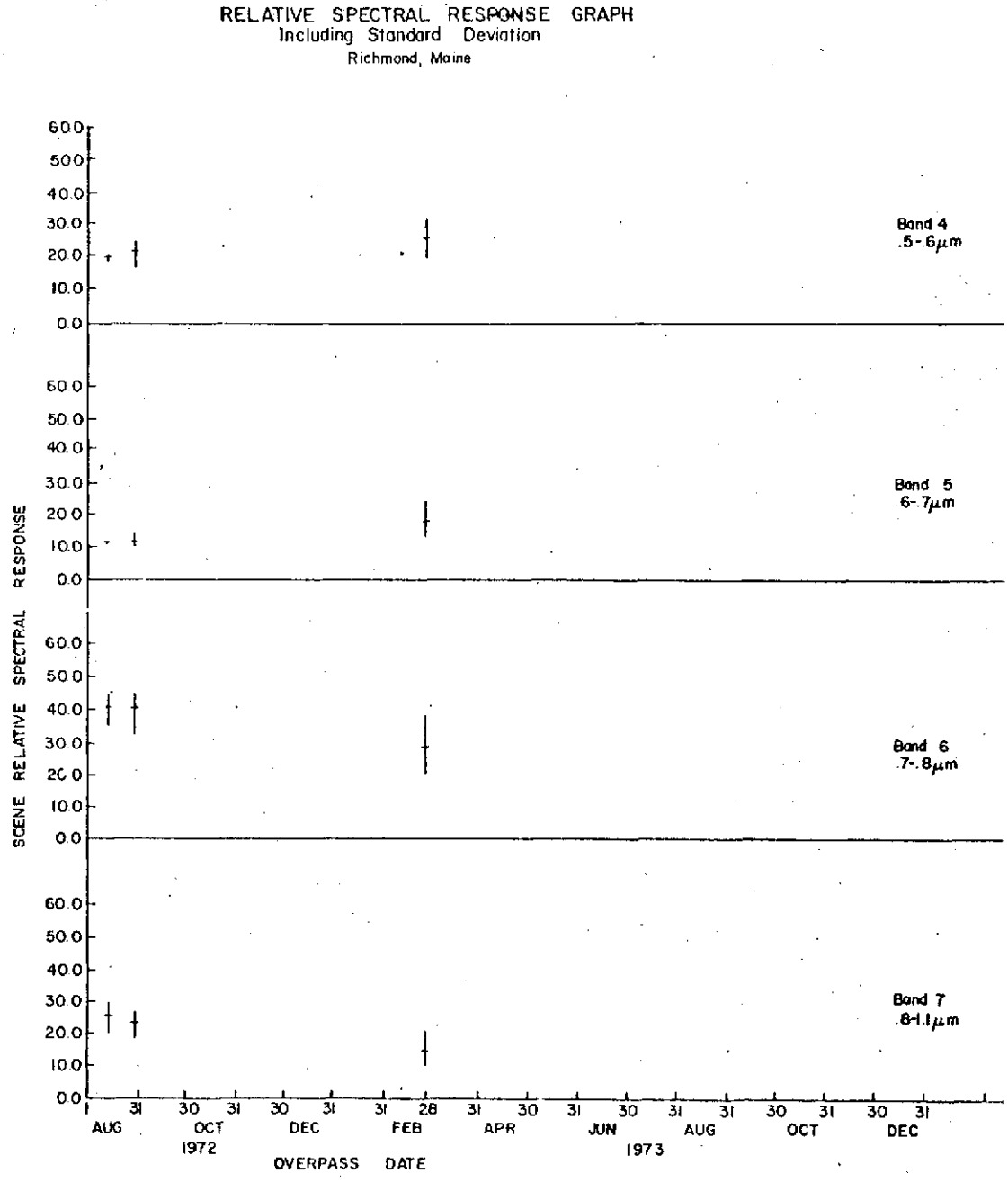
# APPENDIX E

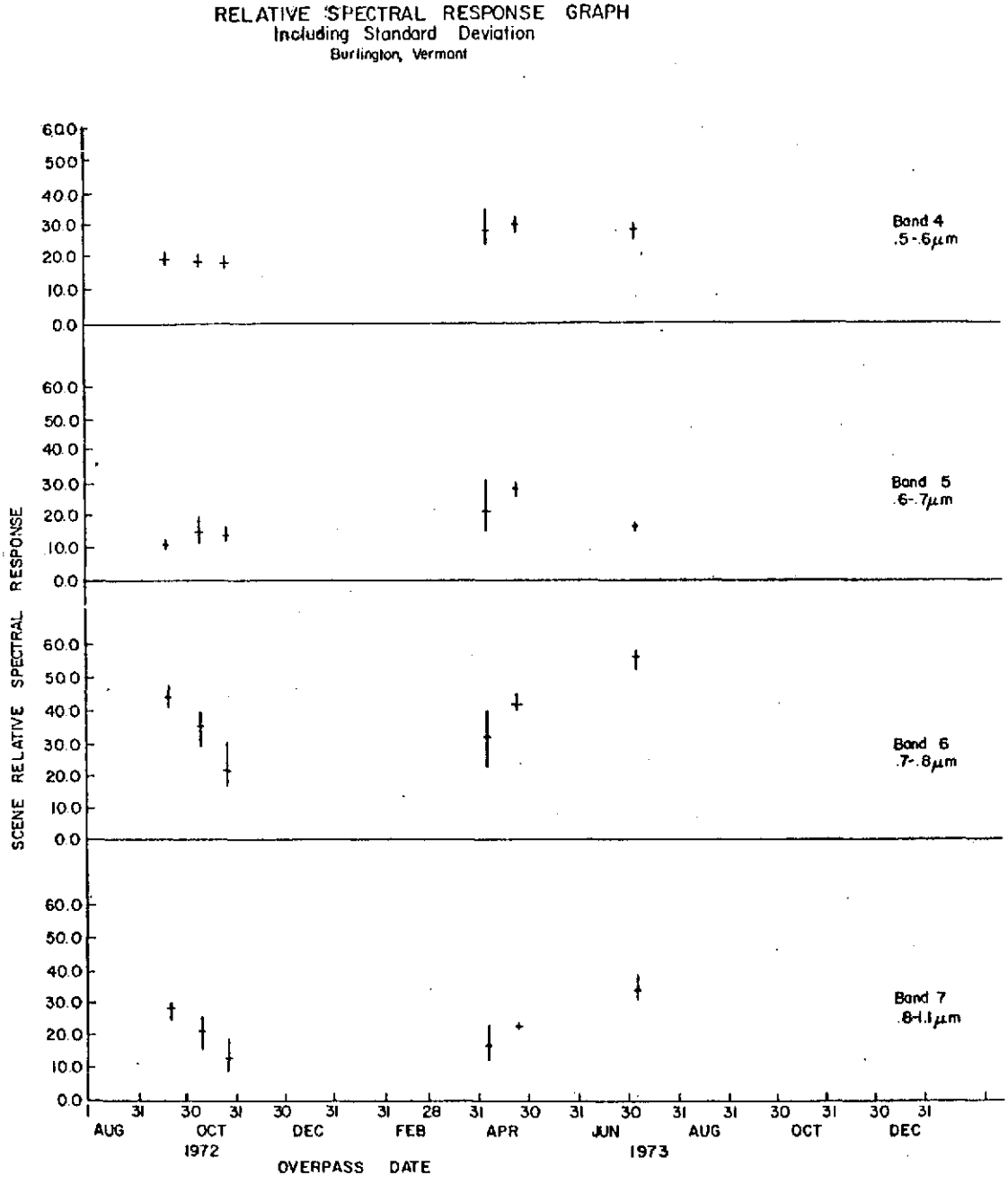
## RELATIVE SPECTRAL RESPONSE GRAPHS FOR EASTERN CORRIDORS



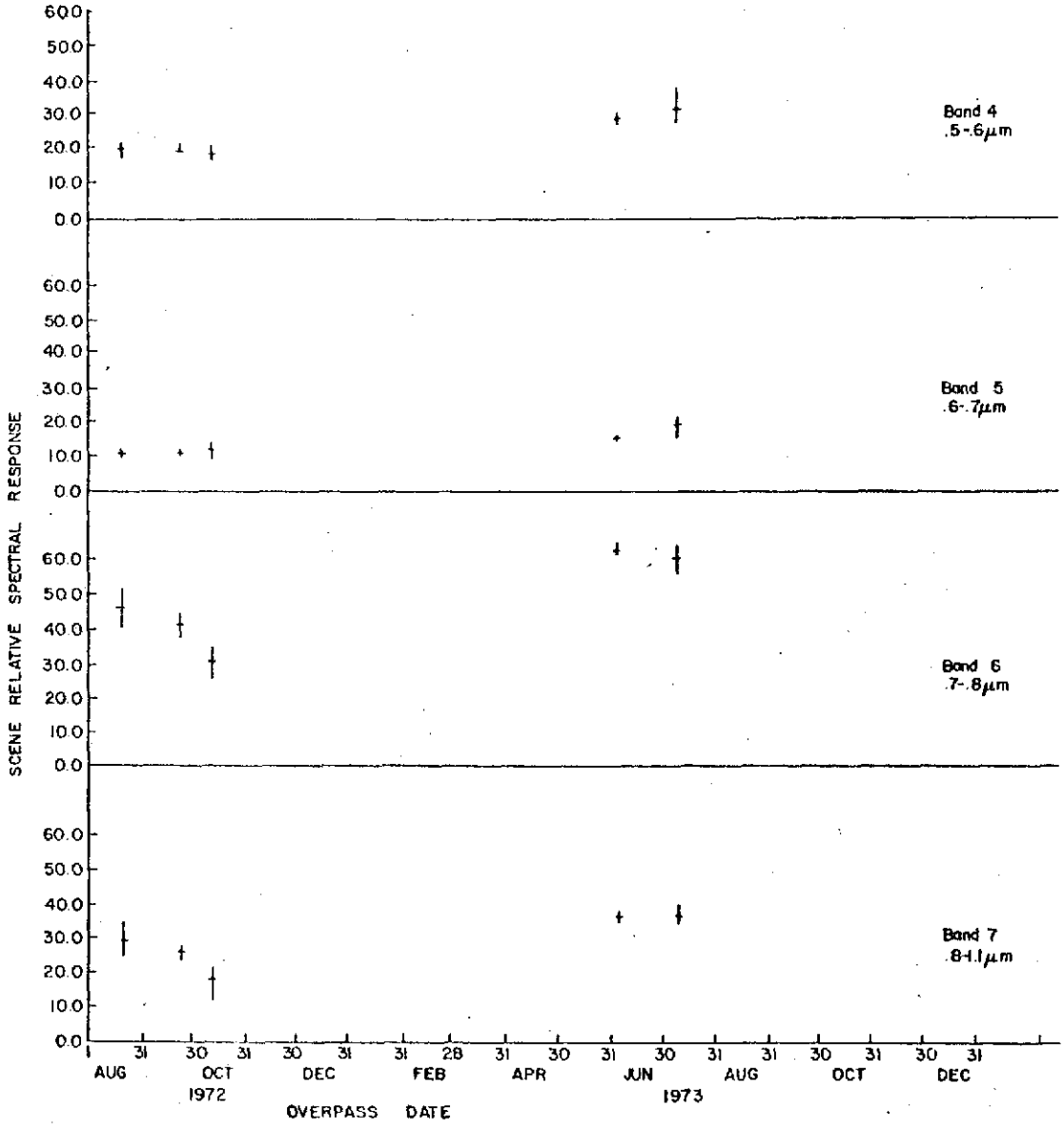
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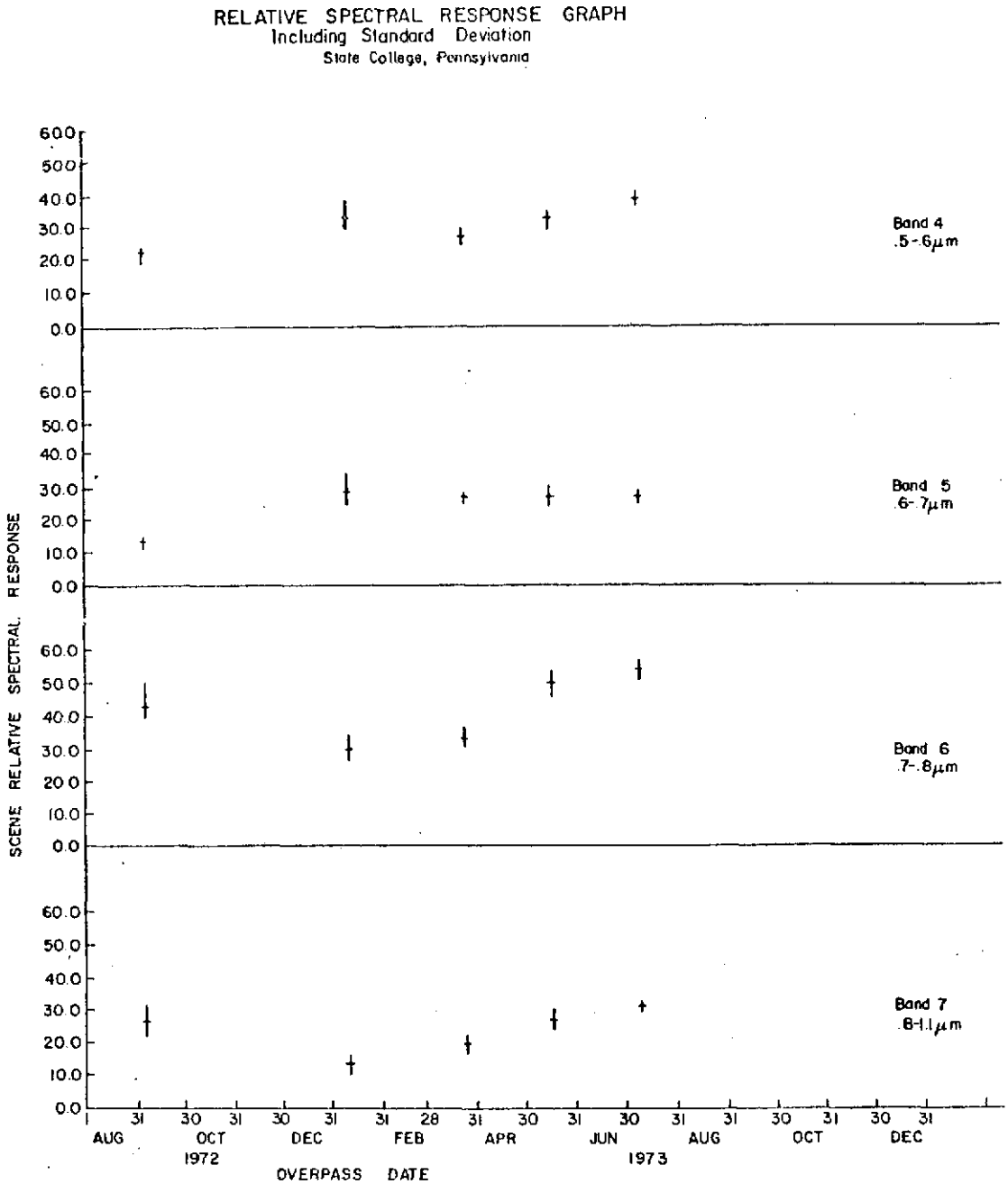

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Orono, Maine
SCENE RELATIVE SPECTRAL RESPONSE
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
60.0
50.0
40.0
30.0
20.0
10.0
0.0
1 31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE

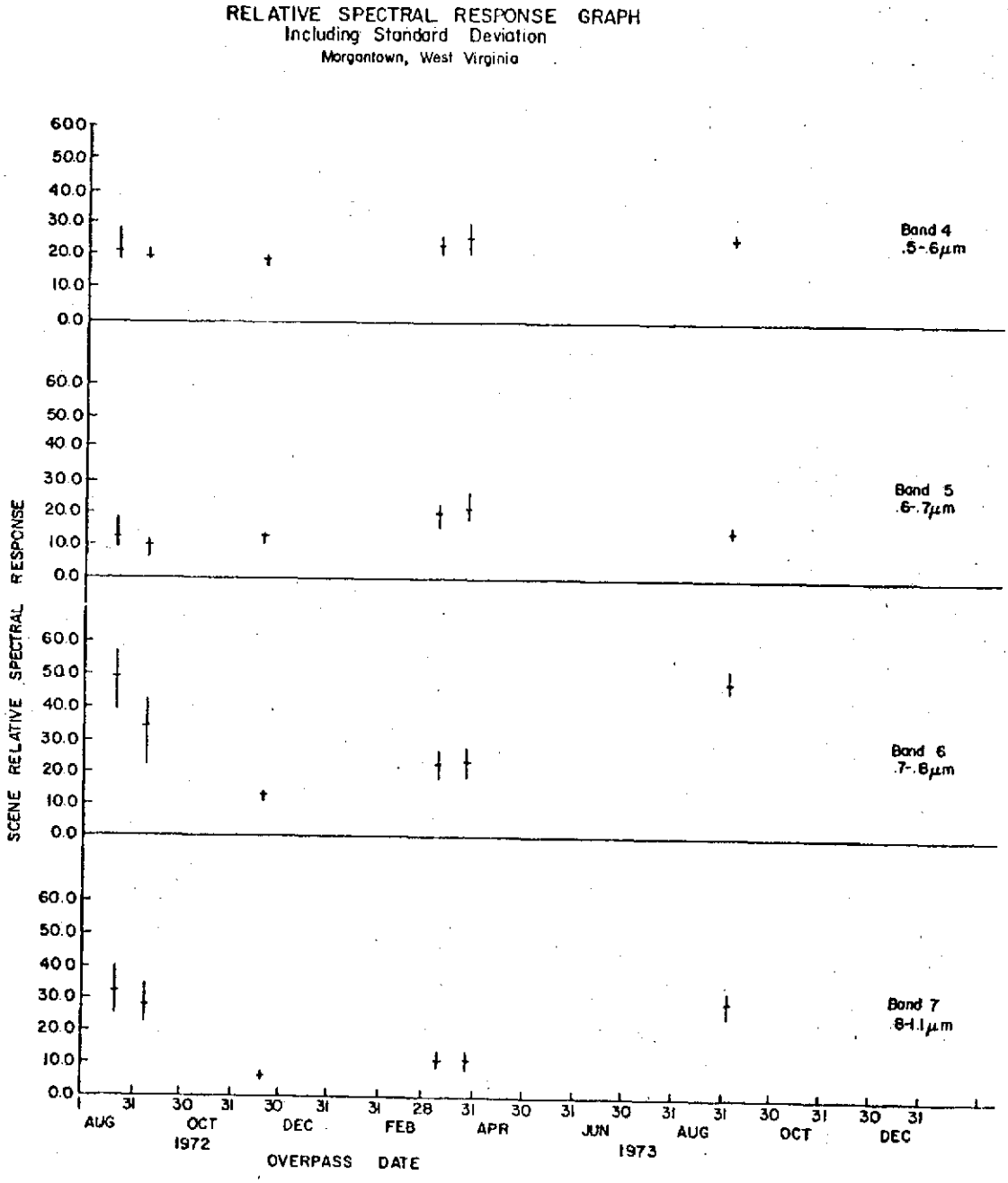

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Richmond, Maine
SCENE RELATIVE SPECTRAL RESPONSE
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE


RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Burlington, Vermont
SCENE RELATIVE SPECTRAL RESPONSE
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
60.0
50.0
40.0
30.0
20.0
10.0
0.0
1 31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE

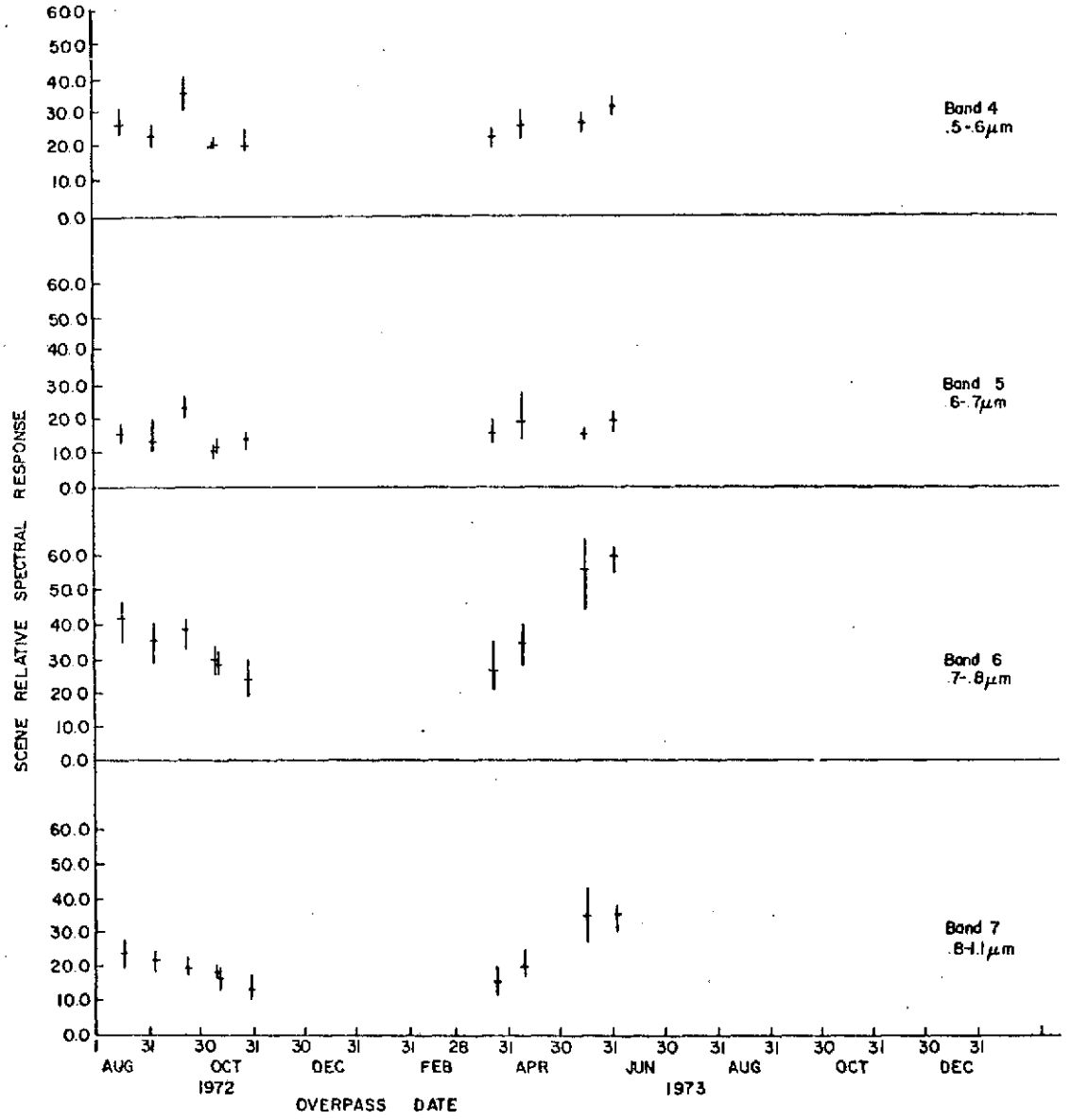
RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Ithaca, New York



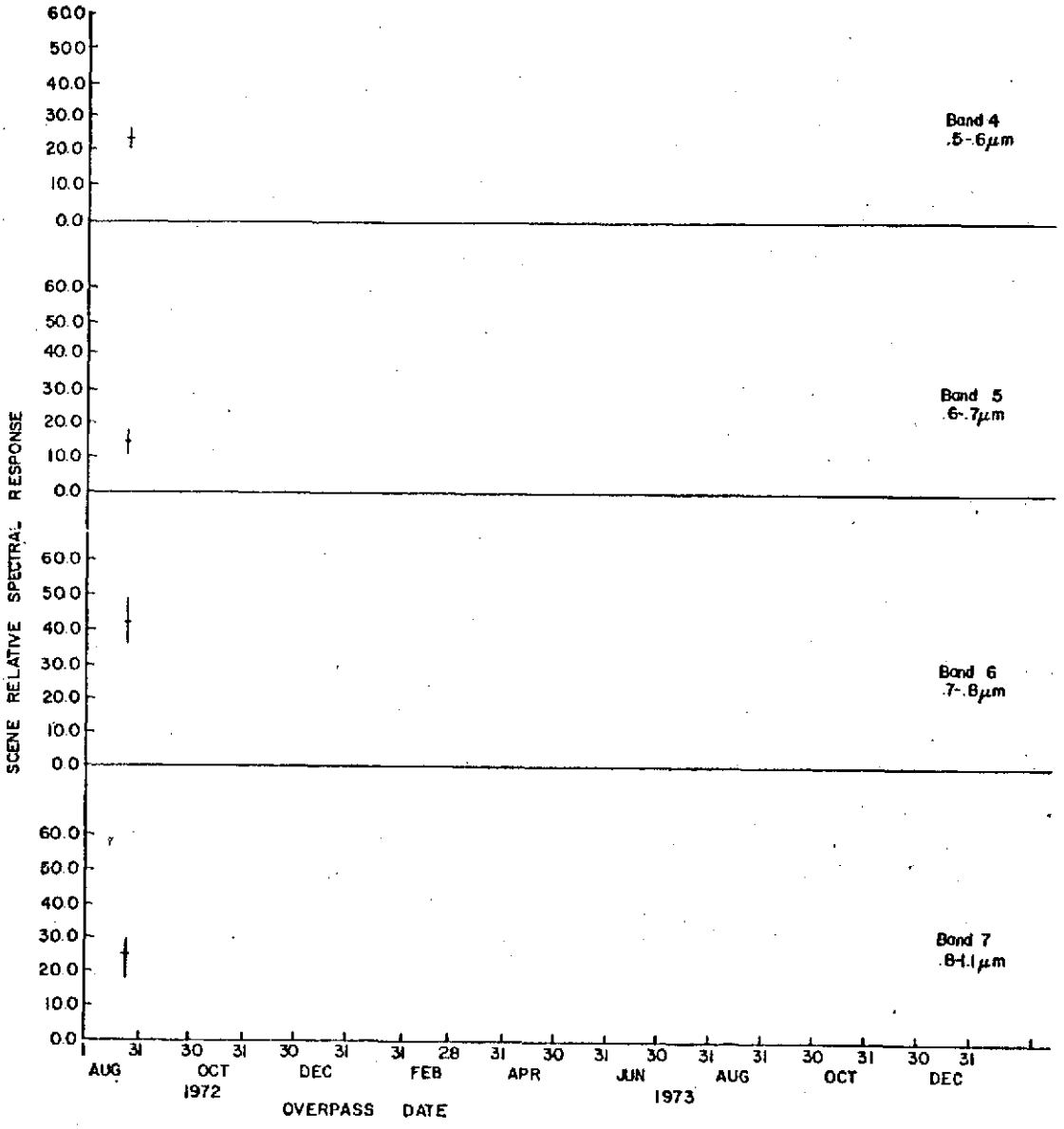

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
State College, Pennsylvania
SCENE RELATIVE SPECTRAL RESPONSE
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
1 31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE

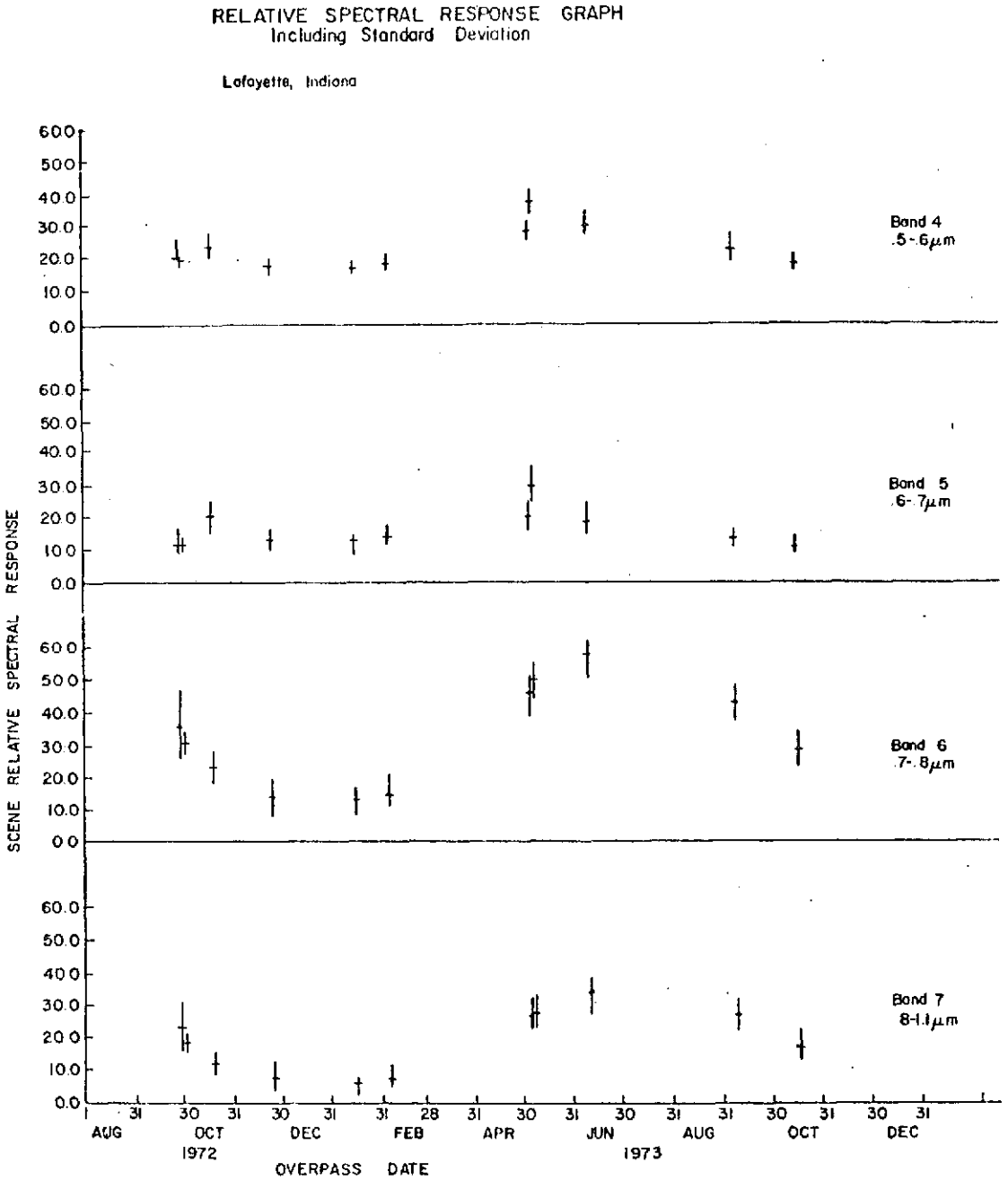

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Morgantown, West Virginia
SCENE RELATIVE SPECTRAL RESPONSE
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
60.0
50.0
40.0
30.0
20.0
10.0
0.0
1 31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Raleigh, North Carolina

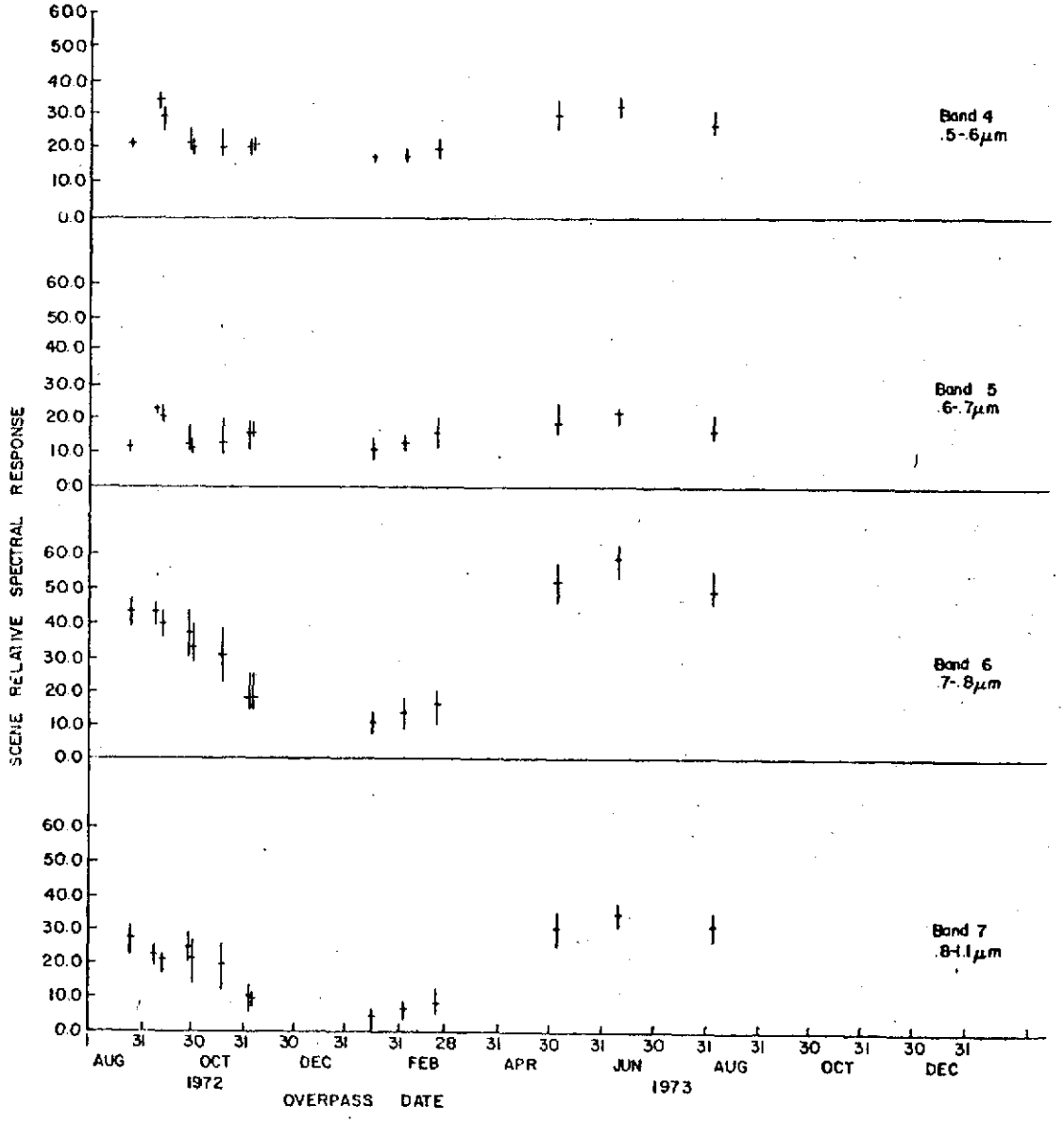


RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Lansing, Michigan

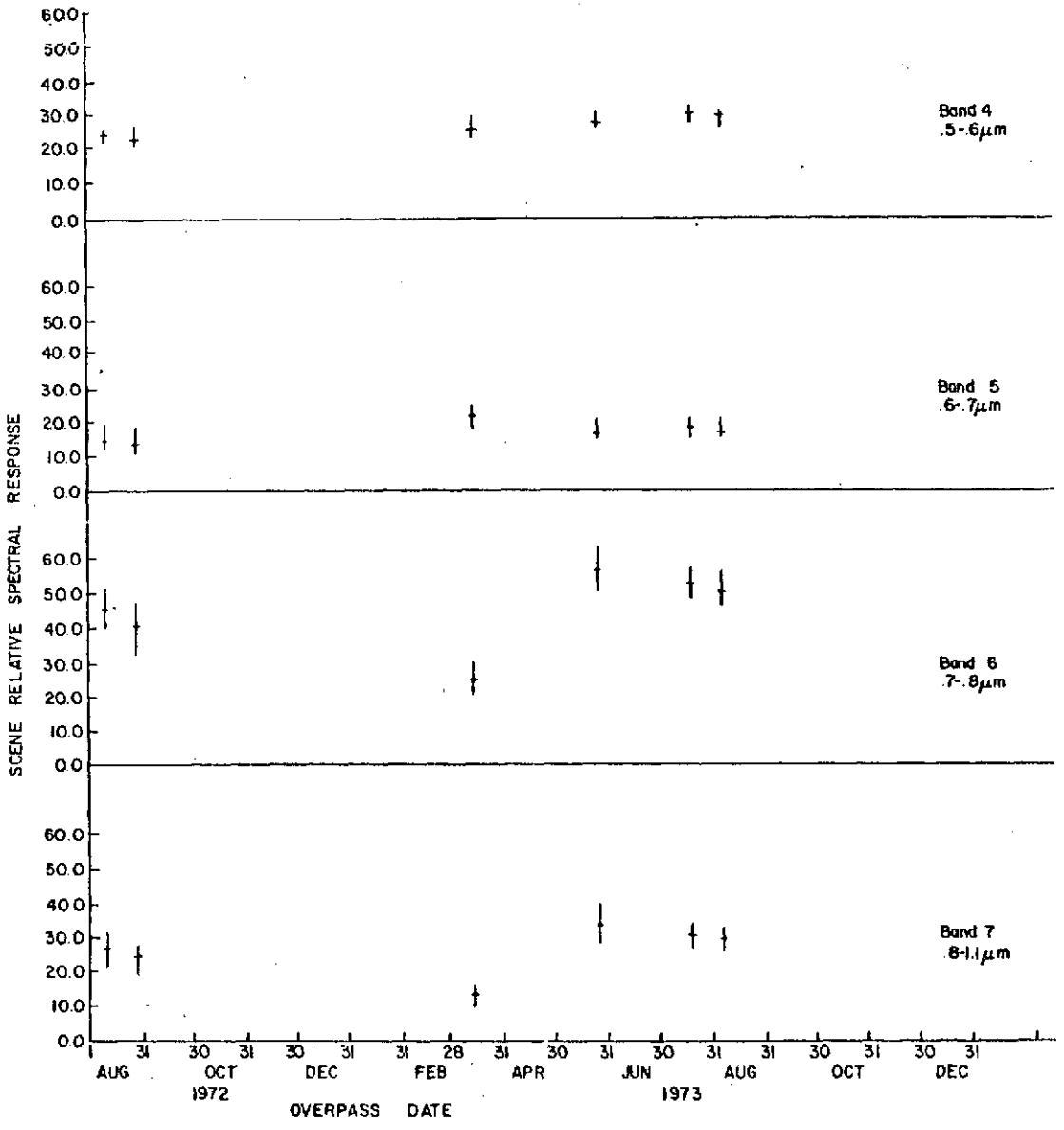


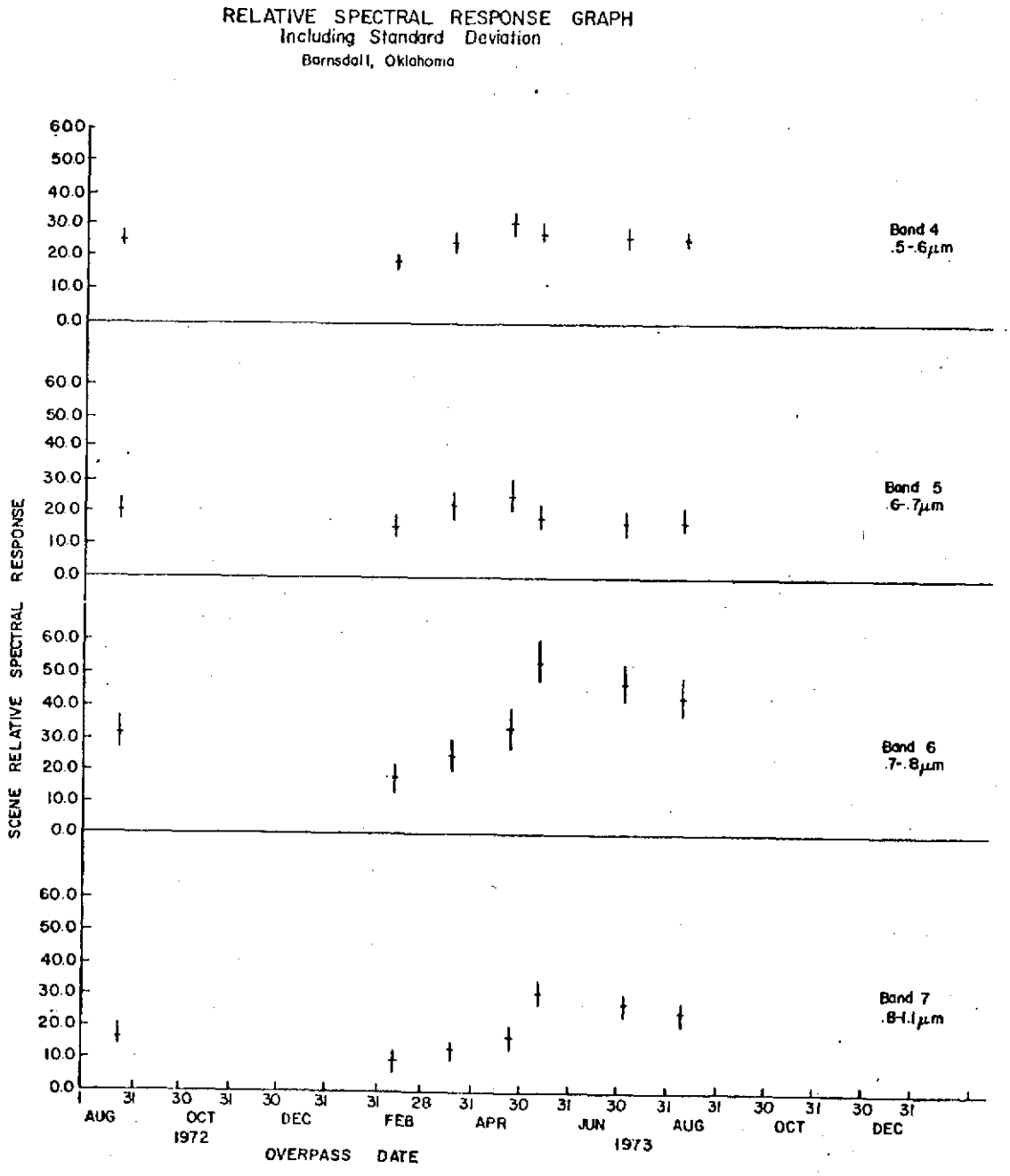

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Lafayette, Indiana
SCENE RELATIVE SPECTRAL RESPONSE
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
AUG
OCT
DEC
FEB
APR
JUN
AUG
OCT
DEC
1972
1973
OVERPASS DATE

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Southern Indiana

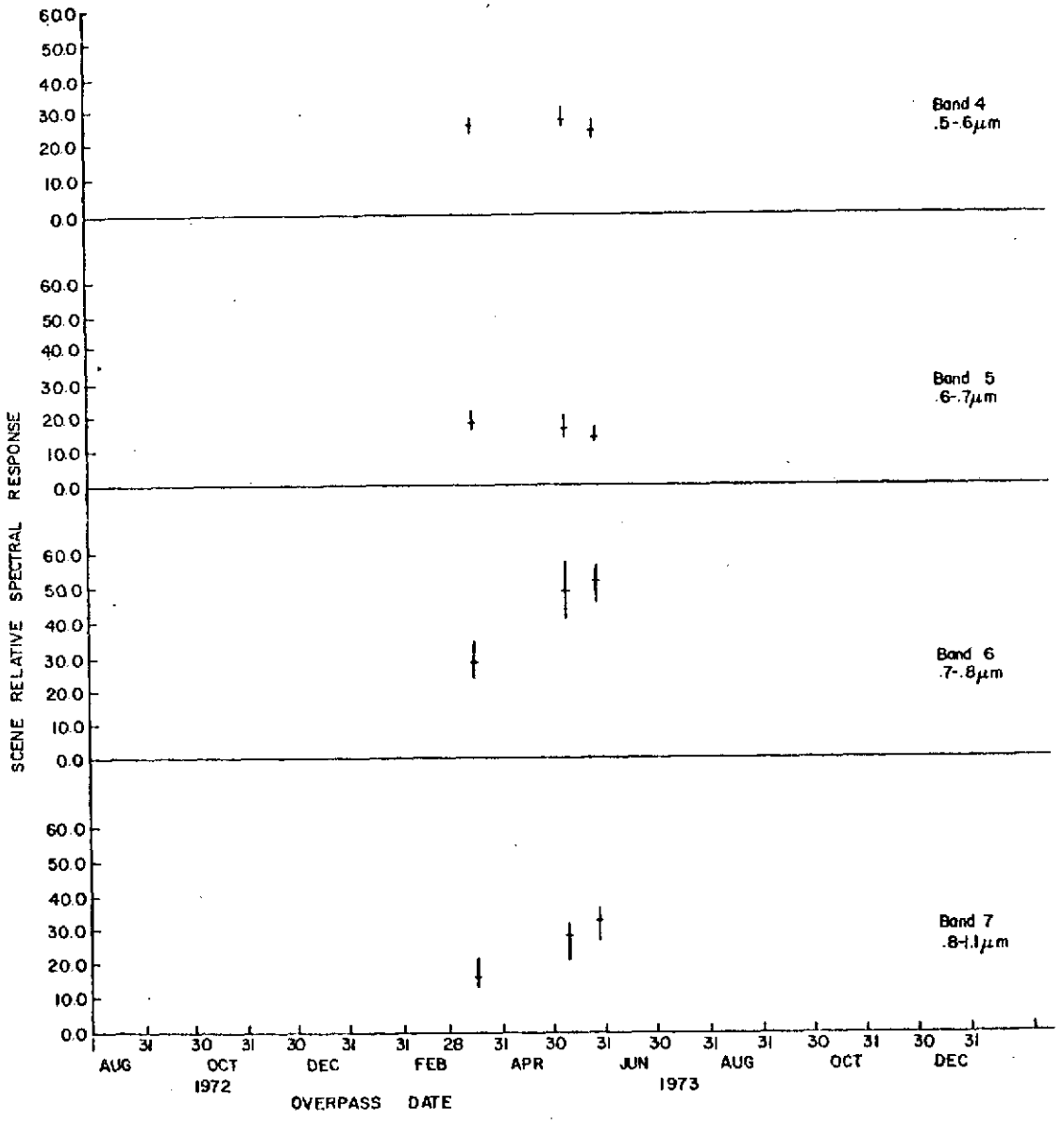


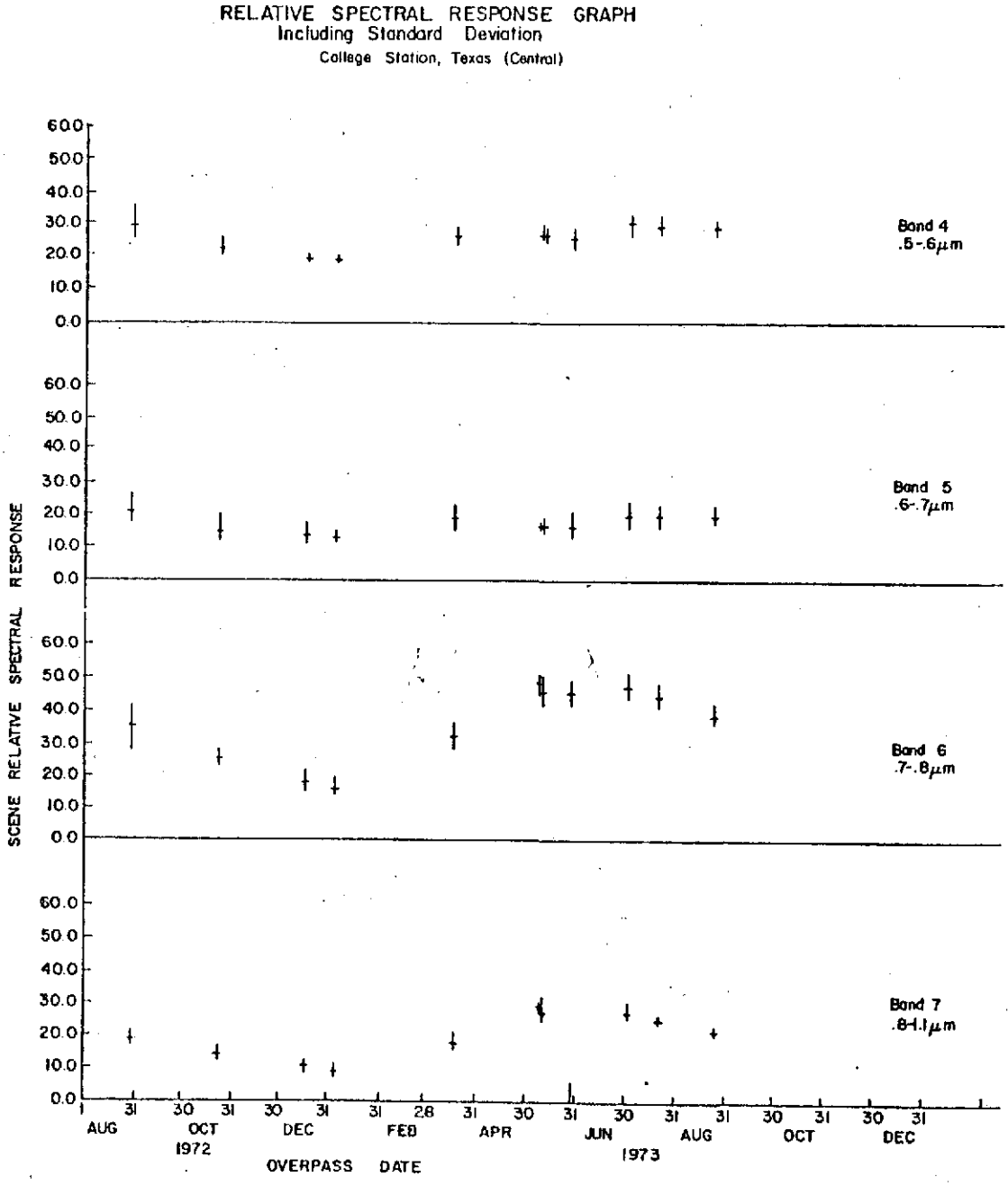
RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Jefferson City, Missouri




RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Barnsdall, Oklahoma
SCENE RELATIVE SPECTRAL RESPONSE
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE

RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
Commerce, Texas (North)




RELATIVE SPECTRAL RESPONSE GRAPH
Including Standard Deviation
College Station, Texas (Central)
SCENE RELATIVE SPECTRAL RESPONSE
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Band 4
.5-.6μm
Band 5
.6-.7μm
Band 6
.7-.8μm
Band 7
.8-1.1μm
31 30 31 30 31 31 28 31 30 31 30 31 31 30 31 30 31
AUG OCT DEC FEB APR JUN AUG OCT DEC
1972 1973
OVERPASS DATE

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# APPENDIX F

## RELATIVE SPECTRAL RESPONSE

## FOR SITES IN THE EASTERN CORRIDORS



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OF POOR QUALITY



RELATIVE SPECTRAL RESPONSE VALUES (ERTS MSS BANDS 4-7)

| LOCATION | DATES | SCENE ID | SOLAR ELEV. (0) | NUMBER of SAMPLES | Mean | | | | Normalized Mean* | | | | Standard Deviation | | | | BRP ** | NOTE *** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 4 | 5 | 6 | 7 | 4 | 5 | 6 | 7 | 4 | 5 | 6 | 7 | | |
| Maine | 09/01/72 | 1040-14543 | 47.5 | 162 | 20.76 | 12.12 | 42.21 | 25.22 | 19.91 | 11.62 | 40.49 | 24.19 | 1.63 | 0.73 | 3.81 | 2.70 | .3508 | F |
| Orono | 02/28/73 | 1220-14553 | 31.0 | 105 | 27.52 | 20.97 | 26.53 | 15.19 | 37.78 | 28.79 | 36.42 | 18.10 | 2.69 | 2.83 | 2.66 | 1.15 | -.2278 | G |
| | 04/23/73 | 1274-14553 | 51.0 | 175 | 23.07 | 16.41 | 27.32 | 14.52 | 20.99 | 14.93 | 24.86 | 13.21 | 1.23 | 1.48 | 2.94 | 1.20 | -.0611 | VG |
| | 07/22/73 | 1364-14544 | 56.0 | 58 | 23.64 | 13.55 | 43.17 | 25.26 | 20.16 | 11.56 | 36.82 | 21.54 | 0.92 | 0.80 | 1.92 | 1.52 | .3017 | VG |
| Richmond | 08/15/72 | 1023-15003 | 52.6 | 68 | 20.15 | 11.78 | 41.09 | 25.59 | 17.94 | 10.49 | 36.51 | 22.79 | 1.04 | 0.51 | 2.49 | 1.81 | .3695 | G |
| | 09/01/72 | 1040-14543 | 47.5 | 91 | 21.60 | 12.76 | 40.11 | 23.56 | 20.72 | 12.24 | 38.48 | 22.60 | 1.75 | 1.03 | 2.65 | 1.81 | .2973 | G |
| | 10/08/72 | 1077-15002 | 35.6 | 23 | 17.83 | 12.04 | 22.35 | 12.04 | 21.75 | 14.69 | 27.26 | 14.69 | 0.58 | 1.11 | 1.34 | 0.98 | .0000 | VG |
| | 02/28/73 | 1220-14553 | 31.0 | 39 | 25.90 | 18.18 | 28.28 | 14.56 | 35.56 | 24.95 | 38.82 | 19.99 | 2.95 | 3.20 | 4.19 | 2.40 | -.1106 | P |
| Vermont | 09/21/72 | 1060-15060 | 41.3 | 38 | 19.50 | 11.63 | 44.61 | 28.37 | 20.98 | 12.51 | 47.99 | 30.52 | 0.92 | 0.82 | 2.13 | 1.24 | .4185 | G |
| Burlington | 10/10/72 | 1079-15115 | 34.9 | 56 | 18.98 | 15.36 | 35.45 | 21.64 | 23.55 | 19.06 | 43.99 | 26.85 | 0.88 | 2.12 | 3.16 | 2.13 | .1697 | F |
| | 10/27/72 | 1096-15063 | 29.4 | 63 | 18.49 | 14.63 | 21.54 | 13.11 | 26.74 | 21.16 | 31.15 | 18.96 | 0.80 | 1.13 | 3.38 | 2.32 | -.0548 | F |
| | 04/07/73 | 1258-15071 | 46.2 | 72 | 27.29 | 21.99 | 31.40 | 17.08 | 26.85 | 21.63 | 30.89 | 16.80 | 2.32 | 3.46 | 3.29 | 2.05 | -.1257 | F |
| | 04/25/73 | 1276-15070 | 52.2 | 7 | 29.71 | 28.14 | 41.86 | 23.00 | 26.70 | 25.29 | 37.61 | 20.67 | 1.60 | 1.21 | 1.95 | 0.82 | -.1005 | F |
| | 07/06/73 | 1348-15062 | 59.1 | 18 | 27.94 | 16.44 | 56.06 | 33.94 | 23.12 | 13.60 | 46.39 | 28.08 | 1.06 | 0.70 | 2.86 | 1.95 | .3474 | F |
| | 07/24/73 | 1366-15060 | 56.6 | 66 | 23.67 | 13.79 | 60.23 | 38.23 | 20.13 | 11.72 | 51.20 | 32.50 | 0.88 | 0.69 | 1.57 | 0.99 | .4698 | E |
| | 10/22/73 | 1456-15041 | 30.0 | 85 | 17.04 | 12.35 | 19.35 | 10.48 | 24.20 | 17.54 | 27.48 | 15.30 | 0.75 | 1.37 | 1.26 | 1.00 | -.0820 | E |
| New York | 08/10/72 | 1027-15233 | 51.7 | 108 | 20.19 | 11.85 | 46.56 | 29.31 | 18.27 | 10.72 | 42.12 | 26.52 | 1.01 | 0.62 | 3.15 | 2.24 | .4241 | F |
| Ithaca | 09/23/72 | 1062-15181 | 42.7 | 42 | 19.52 | 11.74 | 41.43 | 26.48 | 20.44 | 12.29 | 43.38 | 27.72 | 0.89 | 0.83 | 2.44 | 1.29 | .3856 | G |
| | 10/11/72 | 1080-15183 | 36.8 | 155 | 18.75 | 12.77 | 30.39 | 18.39 | 22.22 | 15.14 | 36.02 | 21.80 | 0.97 | 1.03 | 2.18 | 1.48 | .1803 | E |
| | 06/02/73 | 1314-15190 | 60.9 | 12 | 28.44 | 15.44 | 62.89 | 36.56 | 23.11 | 12.55 | 51.10 | 29.71 | 0.88 | 0.53 | 1.69 | 0.88 | .4061 | F |
| | 07/08/73 | 1350-15183 | 60.0 | 72 | 31.10 | 19.53 | 60.76 | 36.96 | 25.50 | 16.01 | 49.81 | 30.30 | 2.04 | 1.86 | 2.01 | 1.50 | .3086 | VG |
| | 10/06/73 | 1440-15170 | 38.0 | 23 | 17.78 | 12.91 | 29.09 | 17.04 | 20.35 | 14.79 | 33.30 | 19.51 | 0.60 | 1.00 | 1.16 | 1.02 | .1378 | E |
| | 10/24/73 | 1458-15162 | 32.0 | 56 | 19.63 | 18.11 | 25.50 | 14.32 | 26.30 | 24.26 | 34.16 | 19.18 | 1.02 | 1.33 | 1.45 | 0.88 | .1169 | VG |
| Pennsylvania | 09/06/72 | 1045-15243 | 48.8 | 52 | 22.38 | 13.27 | 42.42 | 26.38 | 21.12 | 12.52 | 40.30 | 24.89 | 1.07 | 0.56 | 2.35 | 1.52 | .3306 | G |
| State College | 01/10/73 | 1171-15245 | 22.5 | 56 | 32.25 | 28.86 | 29.04 | 13.20 | 59.83 | 53.54 | 53.88 | 24.49 | 1.83 | 2.07 | 2.06 | 1.15 | -.3723 | G |
| | 03/23/73 | 1243-15253 | 43.3 | 21 | 26.33 | 27.00 | 32.71 | 19.48 | 27.26 | 27.95 | 33.86 | 20.17 | 1.06 | 0.71 | 1.42 | 1.12 | -.1618 | E |
| | 05/16/73 | 1297-15252 | 59.5 | 42 | 31.50 | 26.62 | 29.24 | 26.86 | 25.96 | 21.94 | 40.57 | 22.13 | 1.02 | 1.51 | 2.30 | 1.63 | .0044 | G |
| | 07/09/73 | 1351-15244 | 60.3 | 30 | 37.97 | 26.17 | 53.47 | 30.07 | 31.04 | 21.39 | 43.71 | 24.58 | 1.03 | 0.87 | 1.38 | 0.74 | .0693 | G |
| West Virginia | 08/20/72 | 1028-15202 | 53.4 | 220 | 21.07 | 12.48 | 49.43 | 32.31 | 18.63 | 11.04 | 43.72 | 28.57 | 1.71 | 1.54 | 4.01 | 2.92 | .4427 | F |
| Morgantown | 09/07/72 | 1046-15301 | 48.5 | 59 | 19.56 | 10.81 | 34.15 | 28.00 | 18.54 | 10.25 | 32.37 | 26.54 | 0.75 | 1.47 | 6.01 | 2.27 | .4429 | F |
| | 11/18/72 | 1118-15305 | 26.8 | 21 | 18.29 | 13.00 | 13.10 | 6.86 | 28.80 | 20.47 | 20.63 | 10.80 | 1.01 | 1.00 | 0.83 | 0.79 | -.3092 | G |
| | 03/06/73 | 1226-15311 | 36.8 | 109 | 22.46 | 19.98 | 22.08 | 11.42 | 26.62 | 23.68 | 26.17 | 13.54 | 1.17 | 1.50 | 1.88 | 1.21 | -.2736 | E |
| | 03/24/73 | 1244-15312 | 43.6 | 41 | 25.12 | 21.49 | 23.46 | 11.66 | 25.86 | 22.13 | 24.15 | 12.00 | 2.25 | 2.04 | 2.17 | 1.24 | -.2965 | G |
| | 06/04/73 | 1316-15312 | 62.0 | 159 | 32.16 | 19.67 | 64.01 | 35.14 | 25.85 | 15.82 | 51.47 | 28.25 | 1.30 | 1.40 | 3.14 | 2.25 | .2822 | G |
| | 09/02/73 | 1406-15300 | 50.5 | 81 | 24.62 | 14.63 | 47.80 | 29.09 | 22.65 | 13.46 | 43.98 | 26.77 | 1.18 | 0.91 | 2.17 | 1.57 | .3307 | G |

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OF POOR QUALITY



| LOCATION | DATES | SCENE ID | SOLAR ELEV. (o) | NUMBER of SAMPLES | RELATIVE SPECTRAL RESPONSE VALUES (ERTS MSS BANDS 4-7) | | | | | | | | | | | | BRP ** | NOTE *** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mean | | | | Normalized Mean* | | | | Standard Deviation | | | | | |
| | | | | | 4 | 5 | 6 | 7 | 4 | 5 | 6 | 7 | 4 | 5 | 6 | 7 | | |
| North Carolina Raleigh | 08/19/72 | 1027-15254 | 55.2 | 72 | 26.17 | 15.99 | 42.22 | 24.26 | 22.63 | 13.83 | 36.51 | 20.98 | 1.24 | 1.13 | 3.25 | 2.16 | .2054 | VG |
| | 09/06/72 | 1045-15254 | 51.2 | 124 | 23.43 | 13.69 | 35.71 | 21.90 | 21.35 | 12.47 | 32.53 | 19.95 | 1.22 | 1.36 | 2.68 | 1.75 | .2306 | G |
| | 09/24/72 | 1063-15254 | 46.3 | 255 | 35.64 | 23.51 | 38.42 | 19.94 | 35.00 | 23.09 | 37.73 | 19.58 | 1.25 | 1.20 | 1.95 | 1.14 | -.0821 | E |
| | 10/11/72 | 1080-15201 | 41.1 | 57 | 19.75 | 11.21 | 29.95 | 13.28 | 26.33 | 12.11 | 32.35 | 19.74 | 0.47 | 0.73 | 1.68 | 1.11 | .2397 | E |
| | 10/12/72 | 1081-15255 | 40.8 | 194 | 20.95 | 12.73 | 28.69 | 16.72 | 22.76 | 13.83 | 31.07 | 18.17 | 0.92 | 0.90 | 4.83 | 1.69 | .1354 | F |
| | 10/30/72 | 1099-15261 | 35.4 | 100 | 20.12 | 14.96 | 24.05 | 13.85 | 24.66 | 18.34 | 29.48 | 16.98 | 1.20 | 1.85 | 2.18 | 1.26 | -.0385 | VG |
| | 03/23/73 | 1243-15265 | 45.8 | 160 | 22.49 | 16.12 | 26.53 | 15.41 | 22.27 | 15.96 | 26.27 | 15.26 | 1.15 | 1.38 | 2.50 | 1.60 | -.0225 | G |
| | 04/10/73 | 1261-15265 | 52.1 | 97 | 25.49 | 19.16 | 34.53 | 19.59 | 22.98 | 17.24 | 31.07 | 17.63 | 2.08 | 3.07 | 3.80 | 1.94 | .0110 | G |
| | 05/16/73 | 1293-15263 | 61.0 | 118 | 25.82 | 15.31 | 55.66 | 34.63 | 20.96 | 12.43 | 45.18 | 28.11 | 0.97 | 0.84 | 4.54 | 3.31 | .3868 | P |
| | 06/02/73 | 1314-15204 | 62.6 | 95 | 31.02 | 19.07 | 59.76 | 35.46 | 24.81 | 15.25 | 47.79 | 28.36 | 1.23 | 1.42 | 2.06 | 1.72 | .3006 | VG |
| | 10/06/73 | 1440-15184 | 42.0 | 60 | 22.18 | 13.95 | 31.17 | 18.35 | 23.54 | 14.79 | 33.07 | 19.47 | 1.17 | 0.72 | 1.91 | 1.44 | .1362 | E |
| Michigan Lansing | 08/25/72 | 1033-15580 | 50.3 | 60 | 22.92 | 13.98 | 41.60 | 24.87 | 21.07 | 12.85 | 38.25 | 22.86 | 1.57 | 1.79 | 3.37 | 2.47 | .2832 | -- |
| Indiana Lafayette | 09/30/72 | 1069-15585 | 41.4 | 346 | 19.93 | 11.76 | 35.87 | 23.64 | 21.40 | 12.63 | 38.51 | 25.38 | 1.30 | 1.36 | 4.06 | 3.14 | .3356 | F |
| | 10/01/72 | 1070-16043 | 41.1 | 36 | 19.39 | 11.58 | 30.83 | 18.97 | 20.94 | 12.51 | 33.30 | 20.49 | 0.84 | 0.91 | 2.01 | 1.58 | .3418 | VG |
| | 10/19/72 | 1088-16050 | 35.4 | 99 | 23.14 | 20.99 | 23.21 | 13.72 | 28.36 | 25.73 | 28.45 | 15.59 | 1.63 | 2.41 | 2.69 | 1.63 | -.2453 | G |
| | 11/24/72 | 1124-16052 | 25.4 | 196 | 17.15 | 13.06 | 14.15 | 7.69 | 28.39 | 21.62 | 23.42 | 12.73 | 1.24 | 1.33 | 2.44 | 1.82 | -.2588 | G |
| | 01/16/73 | 1177-15591 | 22.8 | 216 | 16.83 | 12.94 | 13.05 | 6.27 | 30.84 | 23.71 | 23.91 | 11.49 | 0.85 | 1.20 | 1.66 | 1.23 | -.3472 | E |
| | 02/04/73 | 1196-16052 | 27.1 | 290 | 18.17 | 14.20 | 14.62 | 7.34 | 28.32 | 22.13 | 22.79 | 11.44 | 1.22 | 1.17 | 2.15 | 1.31 | -.3184 | E |
| | 05/04/73 | 1285-15595 | 57.0 | 123 | 28.09 | 20.18 | 45.66 | 26.59 | 23.78 | 17.08 | 38.65 | 22.51 | 1.31 | 2.12 | 2.96 | 2.11 | .1370 | G |
| | 05/05/73 | 1286-16053 | 57.2 | 125 | 36.39 | 29.22 | 49.54 | 27.24 | 30.74 | 24.58 | 41.84 | 23.01 | 1.64 | 2.23 | 2.74 | 2.03 | -.0350 | VG |
| | 06/09/73 | 1321-15593 | 61.7 | 222 | 29.16 | 18.37 | 57.65 | 33.92 | 23.51 | 14.81 | 46.49 | 27.35 | 1.62 | 2.00 | 3.02 | 2.15 | .2973 | F |
| | 07/15/73 | 1357-15590 | 59.6 | 71 | 27.21 | 16.39 | 59.96 | 38.24 | 22.38 | 13.48 | 49.32 | 31.46 | 0.89 | 1.05 | 2.00 | 1.66 | .3999 | G |
| | 07/16/73 | 1358-16045 | 59.5 | 162 | 23.44 | 14.37 | 51.38 | 33.48 | 19.30 | 11.83 | 42.32 | 27.57 | 1.59 | 1.77 | 1.97 | 2.02 | .3993 | VG |
| | 08/21/73 | 1394-16042 | 52.8 | 183 | 21.77 | 12.66 | 45.60 | 29.55 | 18.96 | 11.29 | 40.67 | 26.35 | 1.50 | 1.42 | 1.90 | 1.22 | .4001 | VG |
| | 09/07/73 | 1411-15581 | 48.3 | 148 | 21.39 | 13.07 | 42.24 | 26.66 | 20.34 | 12.43 | 40.17 | 25.35 | 1.65 | 1.38 | 2.12 | 1.69 | .3421 | G |
| | 10/01/73 | 1448-16030 | 36.0 | 181 | 17.10 | 10.62 | 27.60 | 16.77 | 20.66 | 12.83 | 33.34 | 20.36 | 0.88 | 1.27 | 2.45 | 1.90 | .2245 | VG |
| | 11/18/73 | 1483-15565 | 26.0 | 111 | 21.85 | 17.55 | 19.64 | 9.79 | 35.41 | 28.44 | 31.82 | 15.86 | 0.97 | 1.04 | 1.52 | 1.18 | -.2838 | E |
| Southern Indiana | 08/26/72 | 1038-15591 | 52.6 | 75 | 20.35 | 11.67 | 43.09 | 27.17 | 16.19 | 10.43 | 38.51 | 24.28 | 0.91 | 0.74 | 2.17 | 2.02 | .3991 | VG |
| | 09/12/72 | 1055-15591 | 47.9 | 30 | 33.47 | 23.00 | 43.73 | 24.07 | 32.03 | 22.01 | 41.85 | 23.08 | 1.50 | 1.02 | 1.98 | 1.55 | .0015 | G |
| | 09/13/72 | 1052-16050 | 47.6 | 58 | 28.45 | 20.88 | 40.45 | 21.60 | 27.35 | 20.08 | 38.89 | 20.77 | 1.54 | 1.31 | 2.03 | 1.69 | .0169 | VG |
| | 09/30/72 | 1064-15591 | 42.5 | 120 | 20.38 | 12.14 | 37.52 | 21.59 | 21.42 | 12.76 | 39.43 | 25.84 | 1.28 | 1.39 | 3.35 | 2.22 | .3390 | VG |
| | 10/01/72 | 1070-16050 | 42.1 | 143 | 19.53 | 11.38 | 33.58 | 21.06 | 20.68 | 12.05 | 35.56 | 22.30 | 1.00 | 0.74 | 4.00 | 2.92 | .2984 | F |
| | 10/19/72 | 1088-16052 | 36.5 | 167 | 19.35 | 12.89 | 30.65 | 19.64 | 23.10 | 15.39 | 36.23 | 23.44 | 1.31 | 1.77 | 3.49 | 2.42 | .2075 | G |
| | 11/05/72 | 1105-15595 | 31.5 | 462 | 19.39 | 15.14 | 18.56 | 10.16 | 26.35 | 20.57 | 25.22 | 13.81 | 1.04 | 1.35 | 2.46 | 1.58 | -.1968 | VG |
| | 11/06/72 | 1106-16054 | 31.2 | 52 | 20.54 | 15.79 | 18.83 | 9.77 | 28.15 | 21.64 | 25.81 | 13.39 | 0.90 | 0.78 | 1.97 | 1.28 | -.2355 | E |
| | 11/16/72 | 1117-16000 | 25.0 | 44 | 16.41 | 10.75 | 10.82 | 4.52 | 27.57 | 18.06 | 18.18 | 7.59 | 0.62 | 1.42 | 1.79 | 1.21 | -.4080 | VG |
| | 02/04/73 | 1196-16055 | 28.1 | 148 | 16.99 | 12.77 | 13.33 | 6.72 | 25.61 | 19.25 | 20.09 | 10.13 | 0.90 | 1.19 | 1.79 | 1.15 | -.3104 | E |
| | 02/22/73 | 1214-16060 | 33.5 | 64 | 19.13 | 15.69 | 16.33 | 8.38 | 24.61 | 20.18 | 21.01 | 10.78 | 1.32 | 1.79 | 2.54 | 1.72 | -.3037 | G |
| | 05/04/73 | 1285-16001 | 57.6 | 115 | 28.30 | 18.30 | 52.03 | 30.56 | 23.80 | 15.39 | 43.98 | 25.70 | 1.74 | 2.23 | 2.54 | 1.84 | .2509 | F |
| | 06/09/73 | 1321-15595 | 62.2 | 43 | 31.70 | 21.14 | 58.70 | 31.84 | 25.44 | 16.97 | 47.11 | 27.96 | 1.06 | 0.99 | 2.29 | 1.79 | .2447 | VG |
| | 07/16/73 | 1358-16051 | 59.9 | 60 | 26.28 | 16.07 | 52.55 | 32.83 | 21.57 | 13.19 | 43.13 | 26.94 | 1.18 | 0.94 | 2.51 | 1.74 | .3427 | F |
| | 08/03/73 | 1376-16050 | 57.0 | 73 | 25.59 | 15.67 | 48.67 | 30.32 | 21.66 | 13.27 | 41.20 | 25.67 | 1.33 | 1.53 | 2.65 | 2.09 | .3185 | VG |
| | 08/20/73 | 1393-15590 | 53.7 | 96 | 26.29 | 16.39 | 47.75 | 29.10 | 23.16 | 14.44 | 42.05 | 25.63 | 1.56 | 1.83 | 2.94 | 2.37 | .2794 | F |
| | 08/21/73 | 1394-16044 | 53.5 | 65 | 21.46 | 13.43 | 42.28 | 27.43 | 18.95 | 11.86 | 37.33 | 24.22 | 1.69 | 2.08 | 2.75 | 2.13 | .3426 | G |

RELATIVE SPECTRAL RESPONSE VALUES (ERTS MSS BANDS 4-7)

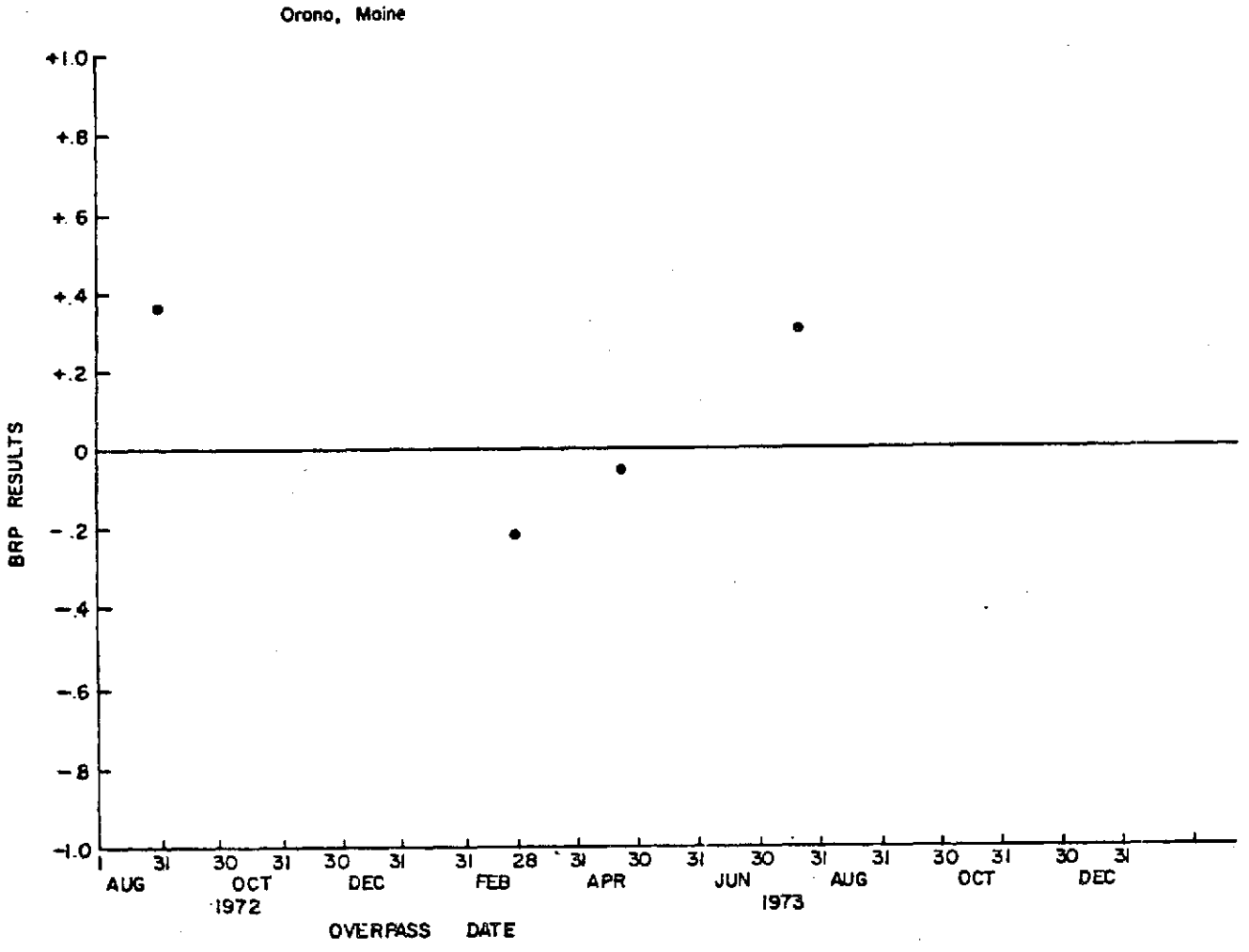
| LOCATION | DATES | SCENE ID | SOLAR ELEV. (0) | NUMBER of SAMPLES | Mean | | | | Normalized Mean* | | | | Standard Deviation | | | | BRP ** | NOTE *** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 4 | 5 | 6 | 7 | 4 | 5 | 6 | 7 | 4 | 5 | 6 | 7 | | |
| Missouri Jefferson City | 08/11/72 | 1019-16220 | 55.4 | 90 | 23.40 | 14.36 | 45.12 | 26.34 | 20.18 | 12.39 | 38.92 | 22.72 | 0.79 | 1.27 | 3.15 | 2.44 | .2943 | G |
| | 08/28/72 | 1036-16162 | 51.8 | 38 | 22.21 | 13.00 | 43.2[illegible] | 26.76 | 20.07 | 11.75 | 39.04 | 24.18 | 0.93 | 0.90 | 1.93 | 1.94 | .3461 | G |
| | 08/29/72 | 1037-16221 | 51.6 | 146 | 22.55 | 13.49 | 40.70 | 24.36 | 20.47 | 12.22 | 36.87 | 22.07 | 1.15 | 1.22 | 3.05 | 1.87 | .2872 | G |
| | 11/08/72 | 1108-16171 | 30.6 | 32 | 23.44 | 19.88 | 22.72 | 12.72 | 32.69 | 27.73 | 31.67 | 17.74 | 1.22 | 1.56 | 1.87 | 1.02 | -.2196 | VG |
| | 03/14/73 | 1234-16174 | 40.8 | 217 | 24.97 | 21.60 | 24.96 | 13.14 | 27.13 | 23.47 | 27.12 | 14.28 | 1.10 | 1.22 | 2.00 | 1.20 | -.2435 | VG |
| | 05/25/73 | 1306-16172 | 61.3 | 91 | 26.78 | 16.32 | 56.49 | 33.43 | 21.68 | 13.21 | 45.73 | 27.06 | 1.44 | 1.63 | 3.69 | 2.59 | .3439 | F |
| | 07/18/73 | 1360-16164 | 59.6 | 222 | 29.27 | 18.00 | 52.68 | 30.39 | 24.09 | 14.82 | 43.36 | 25.02 | 1.14 | 1.31 | 1.94 | 1.45 | .2560 | VG |
| | 08/05/73 | 1378-16162 | 56.7 | 110 | 27.63 | 16.87 | 50.19 | 29.69 | 23.47 | 14.33 | 42.60 | 25.22 | 0.99 | 1.18 | 2.21 | 1.50 | .2753 | VG |
| | 10/17/73 | 1451-16203 | 36.0 | 127 | 17.39 | 11.64 | 22.56 | 13.26 | 20.91 | 14.00 | 27.15 | 15.94 | 0.76 | 1.04 | 2.24 | 1.39 | .0651 | VG |
| Oklahoma Barnsdall | 08/13/72 | 1021-16342 | 56.2 | 165 | 24.96 | 20.76 | 31.14 | 16.88 | 21.33 | 17.74 | 26.61 | 14.42 | 0.82 | 1.37 | 1.78 | 1.09 | -.1030 | G |
| | 02/09/73 | 1201-16352 | 31.5 | 352 | 18.61 | 15.94 | 17.59 | 9.80 | 25.29 | 21.66 | 23.90 | 13.32 | 1.07 | 1.30 | 1.82 | 1.16 | -.2385 | G |
| | 03/17/73 | 1237-16354 | 43.7 | 179 | 24.34 | 22.67 | 24.48 | 13.22 | 25.01 | 23.30 | 25.16 | 13.59 | 1.40 | 1.54 | 2.01 | 1.38 | -.2633 | VG |
| | 04/22/73 | 1273-16354 | 55.8 | 142 | 30.08 | 25.68 | 33.38 | 16.87 | 25.82 | 22.04 | 28.60 | 14.48 | 1.56 | 2.44 | 3.10 | 1.74 | -.2070 | G |
| | 05/10/73 | 1291-16353 | 60.1 | 215 | 27.37 | 18.61 | 53.08 | 30.27 | 22.42 | 15.24 | 43.47 | 24.79 | 1.14 | 1.77 | 2.79 | 1.73 | .2385 | G |
| | 07/03/73 | 1345-16345 | 61.9 | 239 | 25.79 | 16.78 | 46.93 | 27.14 | 20.76 | 13.51 | 37.77 | 21.84 | 1.14 | 1.61 | 2.30 | 1.38 | .2359 | VG |
| | 08/08/73 | 1381-16343 | 57.0 | 130 | 25.22 | 17.17 | 42.40 | 24.25 | 21.35 | 14.54 | 35.89 | 20.53 | 1.18 | 1.91 | 2.17 | 1.32 | .1709 | VG |
| Texas (north) Commerce | 03/16/73 | 1236-16305 | 45.0 | 118 | 24.61 | 17.75 | 27.57 | 15.06 | 24.71 | 17.82 | 27.68 | 15.12 | 1.13 | 1.71 | 2.43 | 1.62 | -.0819 | VG |
| | 05/09/73 | 1290-16303 | 60.8 | 133 | 26.71 | 16.05 | 48.20 | 27.42 | 21.63 | 13.00 | 39.03 | 22.21 | 1.46 | 1.49 | 3.34 | 2.30 | .2615 | G |
| | 05/27/73 | 1305-16302 | 62.8 | 144 | 23.64 | 13.81 | 51.50 | 32.08 | 18.80 | 10.98 | 40.96 | 25.51 | 1.23 | 0.96 | 2.31 | 1.67 | .3981 | G |
| | 07/02/73 | 1344-16300 | 62.2 | 120 | 26.20 | 15.53 | 47.93 | 27.81 | 21.03 | 12.47 | 38.47 | 22.32 | 1.36 | 1.35 | 2.26 | 1.56 | .2833 | VG |
| | 08/07/73 | 1380-16293 | 58.2 | 435 | 25.26 | 15.95 | 43.91 | 25.24 | 21.10 | 13.32 | 36.71 | 21.09 | 1.93 | 2.68 | 3.67 | 2.51 | .2255 | F |
| | 08/25/73 | 1398-16291 | 55.1 | 212 | 26.91 | 17.43 | 38.09 | 20.93 | 23.30 | 15.09 | 32.97 | 18.12 | 1.10 | 1.33 | 2.08 | 1.47 | .0912 | G |
| Texas (central) College Station | 08/30/72 | 1038-16303 | 55.4 | 157 | 28.80 | 20.54 | 34.43 | 18.95 | 24.84 | 17.72 | 29.70 | 16.35 | 1.76 | 1.89 | 3.03 | 1.04 | -.0402 | E |
| | 10/23/72 | 1092-16305 | 41.8 | 213 | 21.32 | 14.68 | 24.21 | 13.70 | 22.71 | 15.64 | 25.79 | 14.59 | 1.12 | 1.13 | 1.25 | 0.75 | -.0345 | E |
| | 12/16/72 | 1146-16311 | 30.2 | 161 | 18.32 | 13.11 | 17.72 | 10.20 | 25.86 | 18.50 | 25.03 | 14.40 | 0.96 | 0.99 | 1.40 | 0.76 | -.1248 | E |
| | 01/03/73 | 1164-16310 | 29.7 | 70 | 18.01 | 12.94 | 15.91 | 8.56 | 25.81 | 18.54 | 22.80 | 12.27 | 0.91 | 0.87 | 1.37 | 0.86 | -.2037 | E |
| | 03/16/73 | 1236-16314 | 46.5 | 153 | 25.69 | 18.94 | 31.07 | 17.07 | 25.15 | 18.54 | 30.41 | 16.71 | 1.10 | 1.74 | 1.79 | 1.05 | -.0519 | VG |
| | 05/08/73 | 1289-16254 | 61.2 | 43 | 26.09 | 16.26 | 47.22 | 28.56 | 21.14 | 13.17 | 38.66 | 23.14 | 1.00 | 0.79 | 1.61 | 0.88 | .2744 | VG |
| | 05/09/73 | 1290-16312 | 61.4 | 58 | 25.55 | 16.17 | 45.12 | 26.31 | 20.66 | 13.08 | 36.49 | 21.28 | 1.01 | 1.31 | 2.14 | 1.60 | .2387 | VG |
| | 05/27/73 | 1308-16311 | 63.1 | 82 | 24.99 | 16.01 | 45.12 | 1.20 | 19.90 | 12.75 | 35.92 | .96 | 1.34 | 1.51 | 1.64 | 3.22 | -.8605 | G |
| | 07/02/73 | 1344-16305 | 62.2 | 48 | 29.23 | 19.75 | 46.69 | 26.21 | 23.46 | 15.85 | 37.48 | 21.04 | 1.53 | 2.48 | 2.02 | 1.24 | .1406 | VG |
| | 07/19/73 | 1361-16245 | 60.8 | 85 | 28.45 | 19.15 | 43.99 | 24.80 | 23.14 | 15.59 | 35.78 | 20.17 | 1.22 | 1.76 | 1.52 | 0.69 | .1280 | E |
| | 08/24/73 | 1397-16242 | 56.3 | 53 | 27.94 | 19.57 | 37.83 | 21.32 | 23.84 | 16.70 | 32.28 | 18.19 | 0.84 | 1.25 | 1.76 | 1.34 | .0428 | G |
| | 10/18/73 | 1452-16284 | 42.0 | 170 | 19.45 | 13.65 | 25.13 | 15.05 | 19.72 | 13.84 | 25.48 | 15.27 | 1.09 | 1.22 | 1.52 | 0.81 | .0488 | E |

* Mean Values Corrected to a 45° solar elevation angle
** Band Ratio Parameter 7-5/7+5
***Comments on Equality of Statistical Output:
E - excellent
VG - very good
G - good
F - fair
P - poor

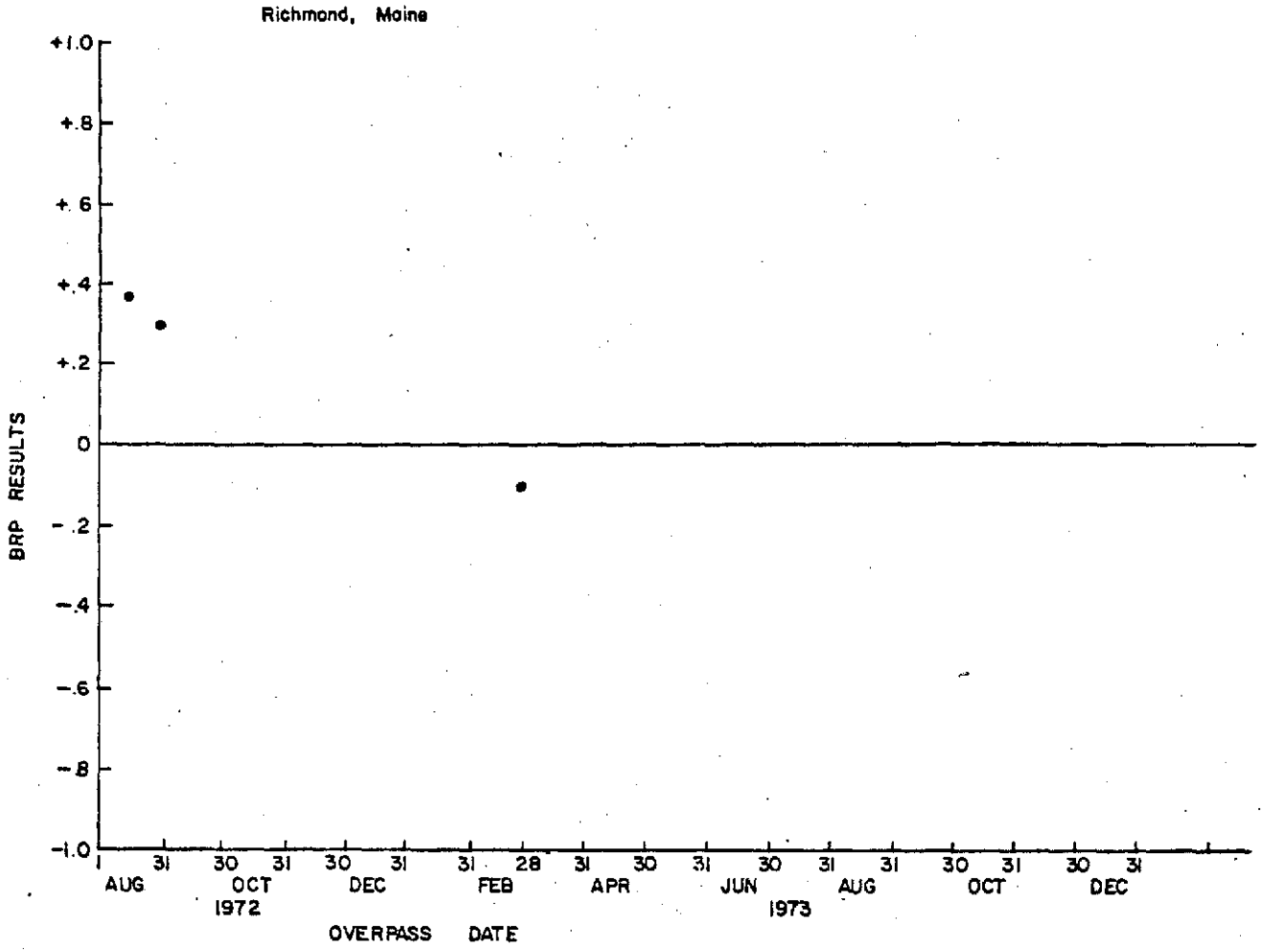
# APPENDIX G

## BAND RATIO PARAMETER GRAPHS FOR EASTERN CORRIDORS

## BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

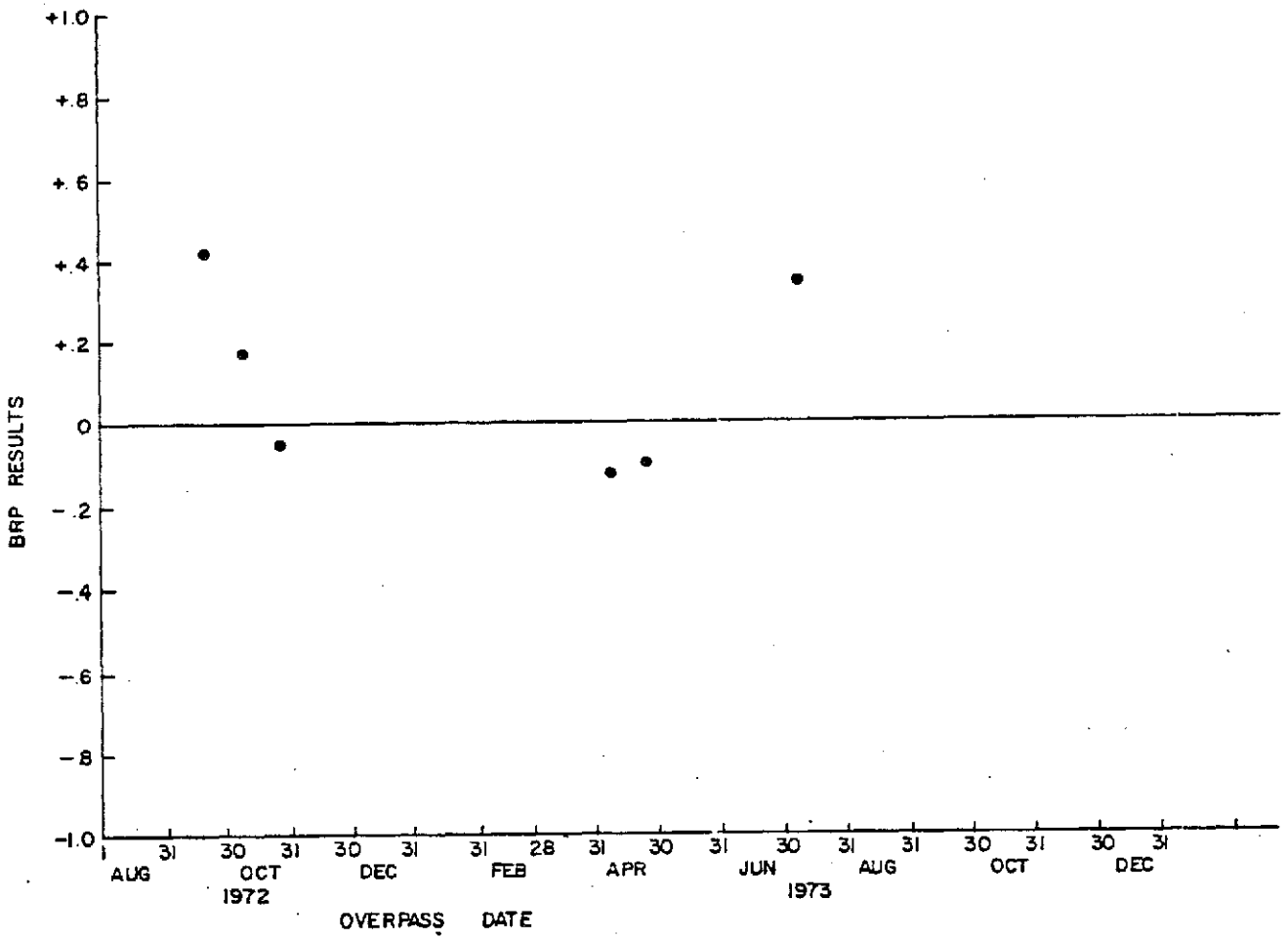


# BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$



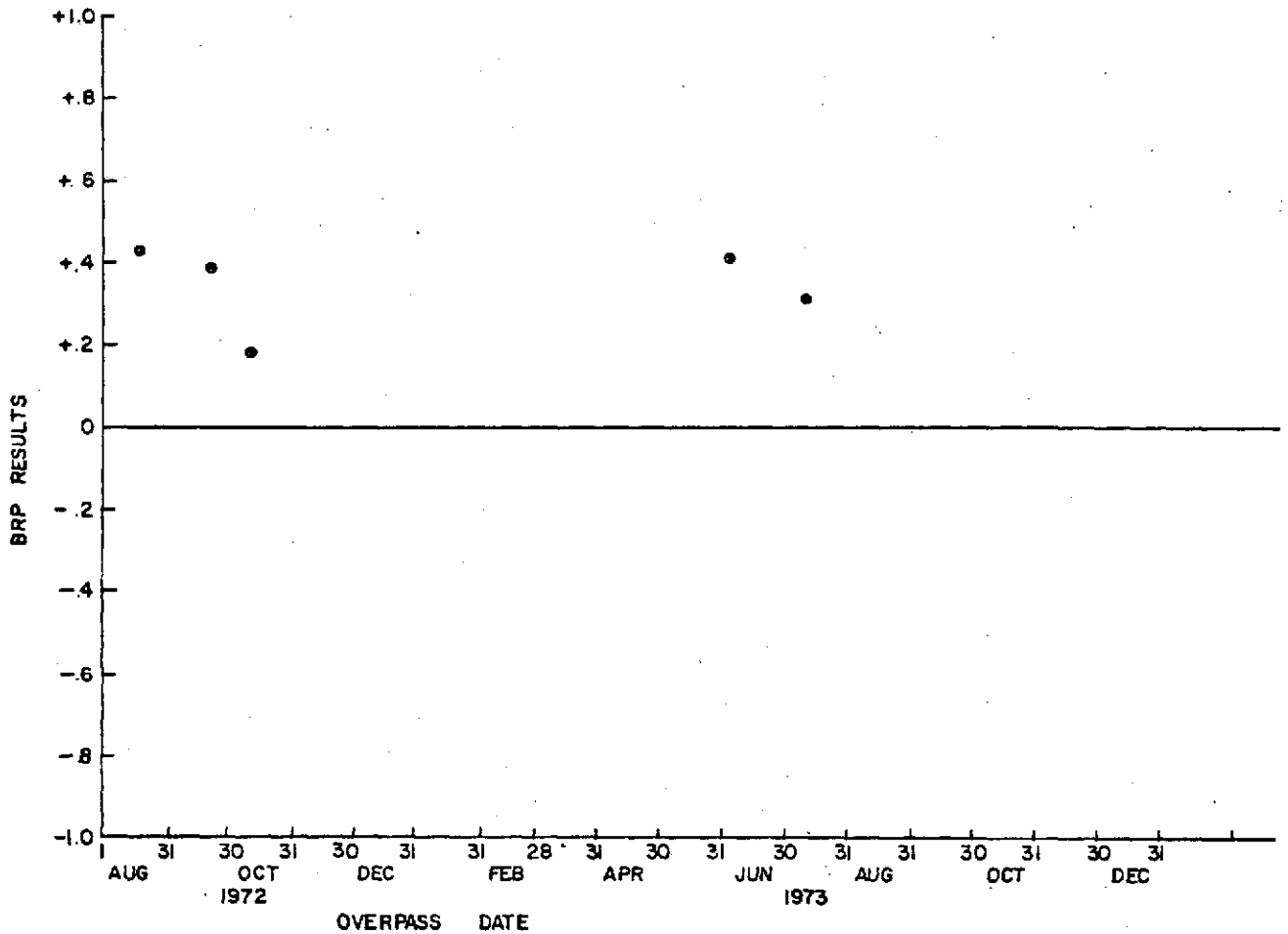
BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

Burlington, Vermont



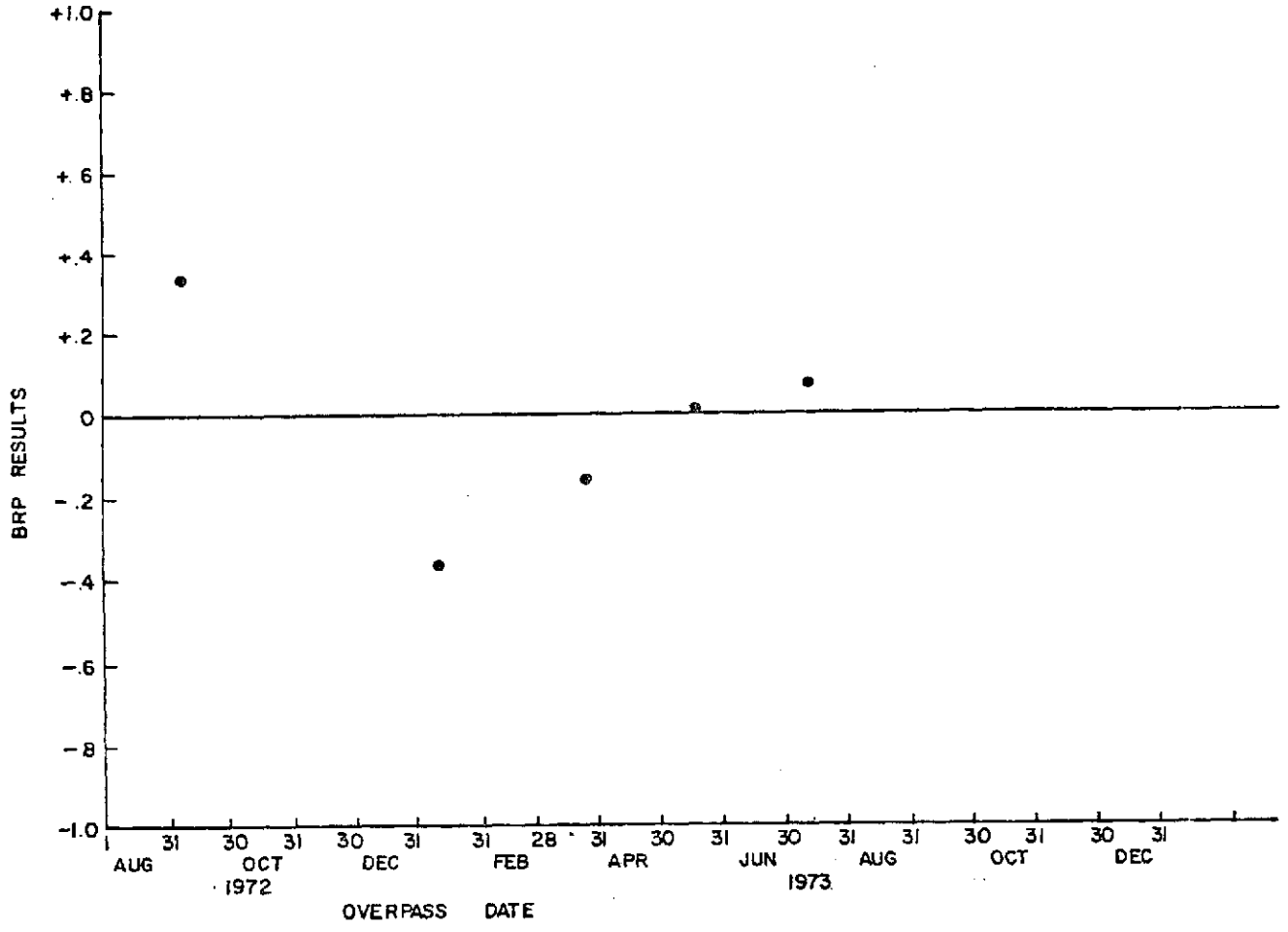
BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

Ithaca, New York

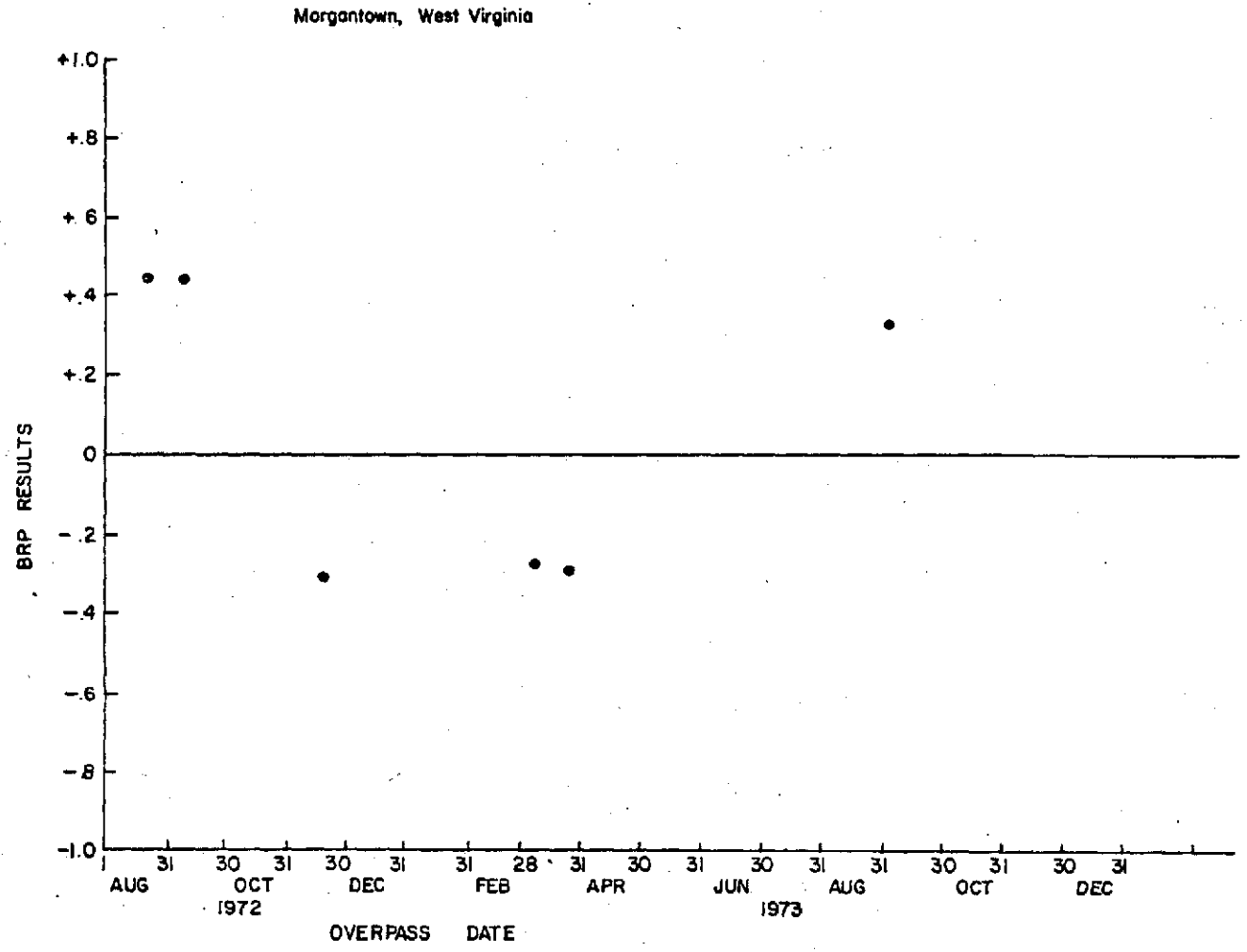


BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

State College, Pennsylvania

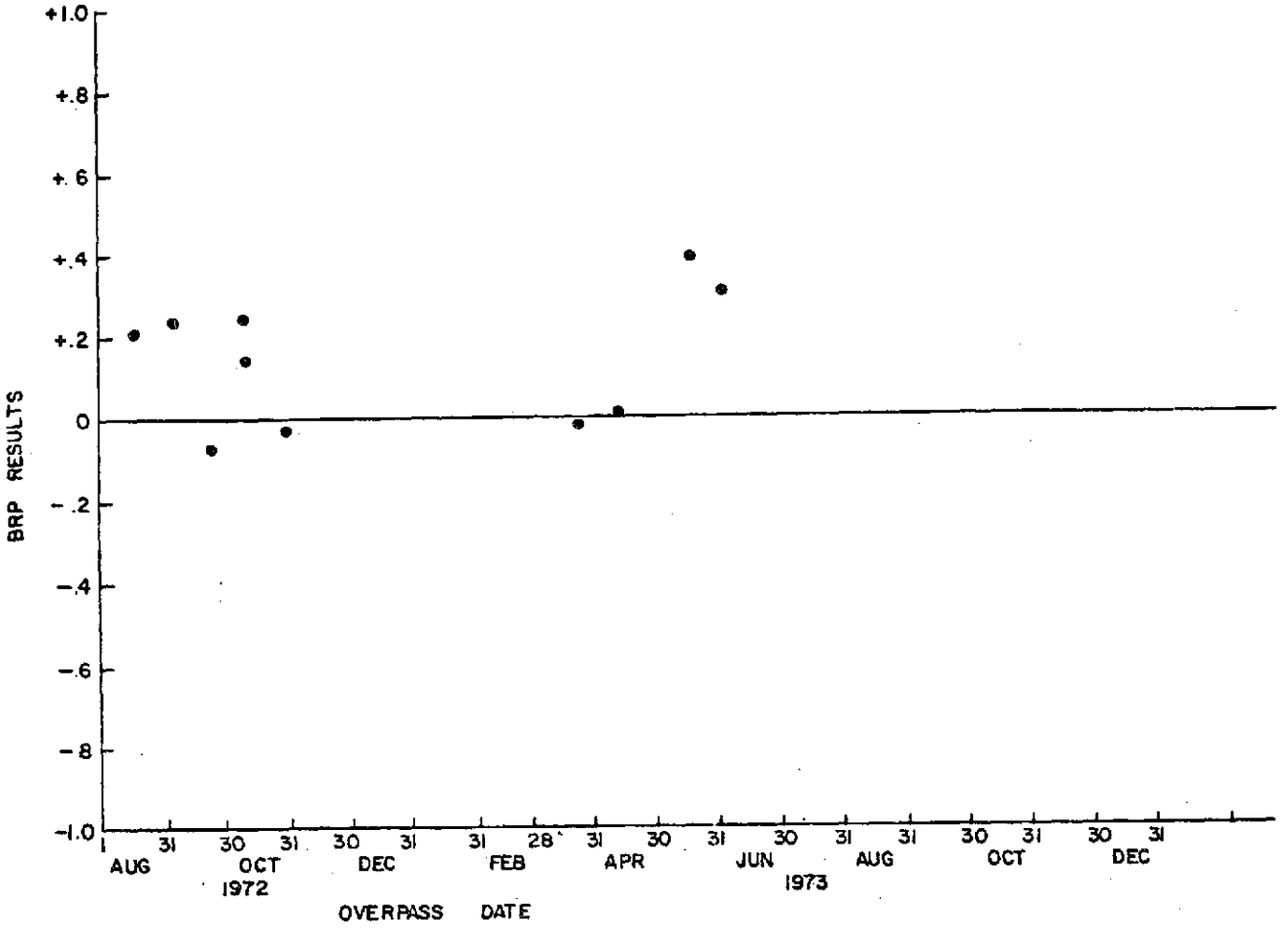


BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

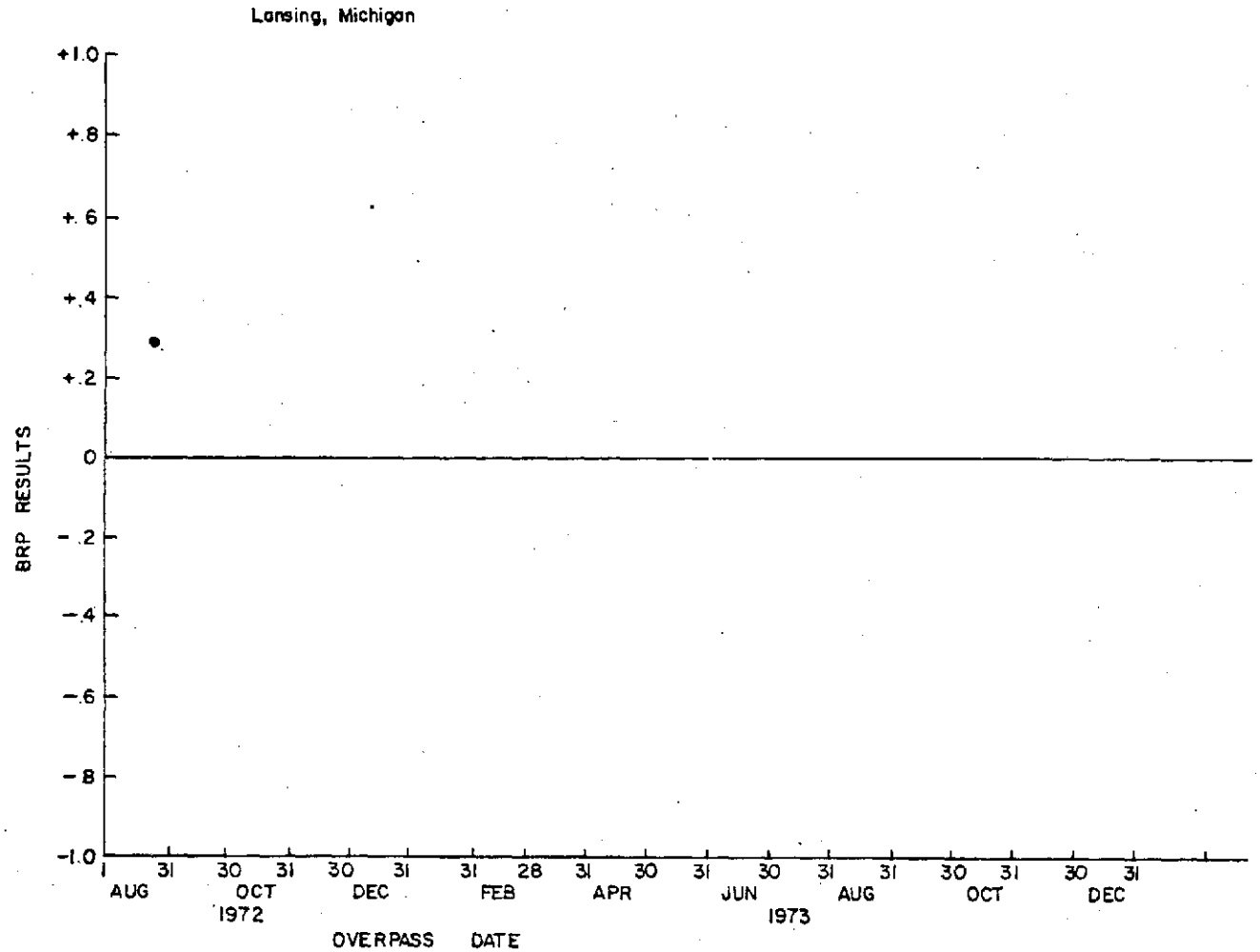


BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

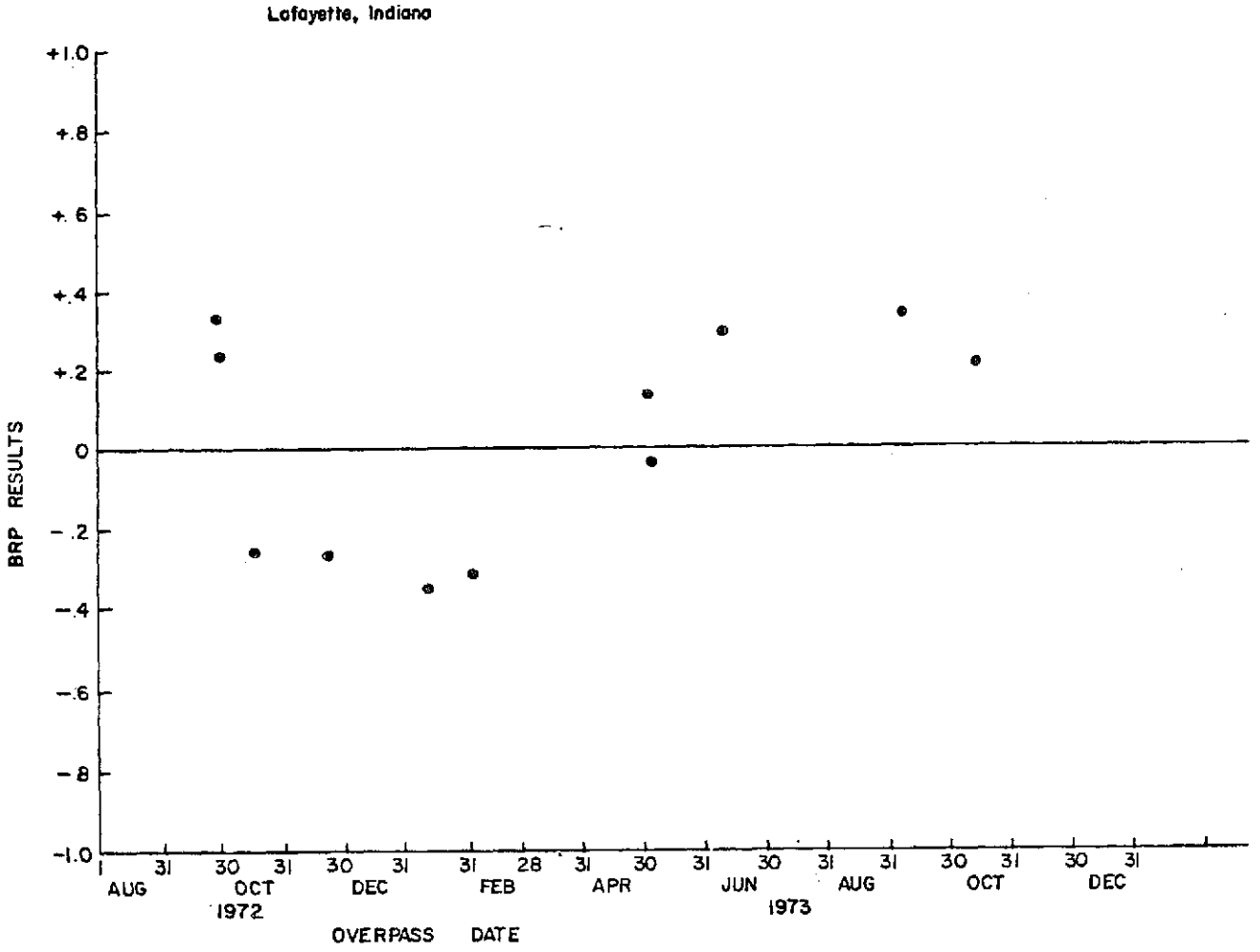
Raleigh, North Carolina



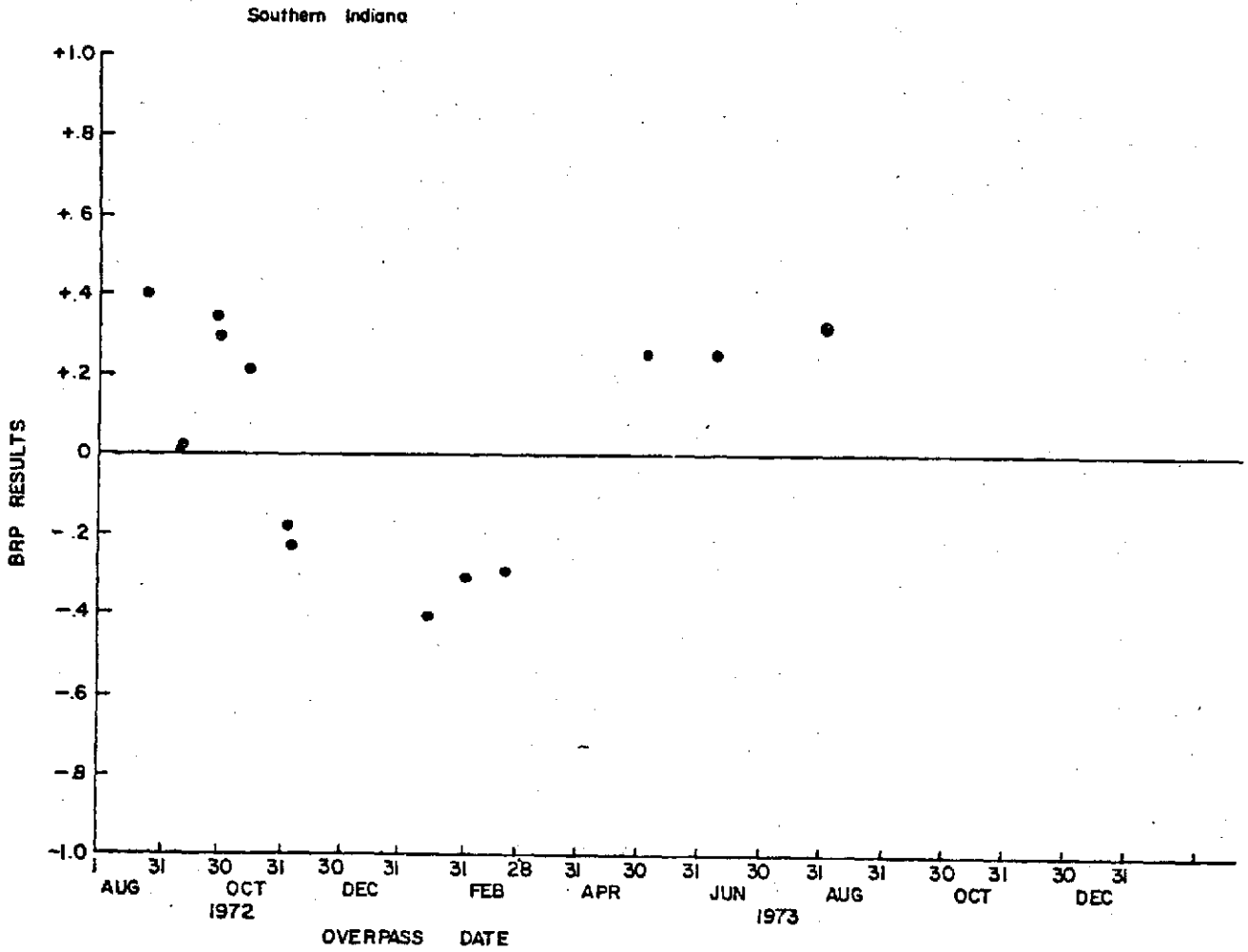
BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$



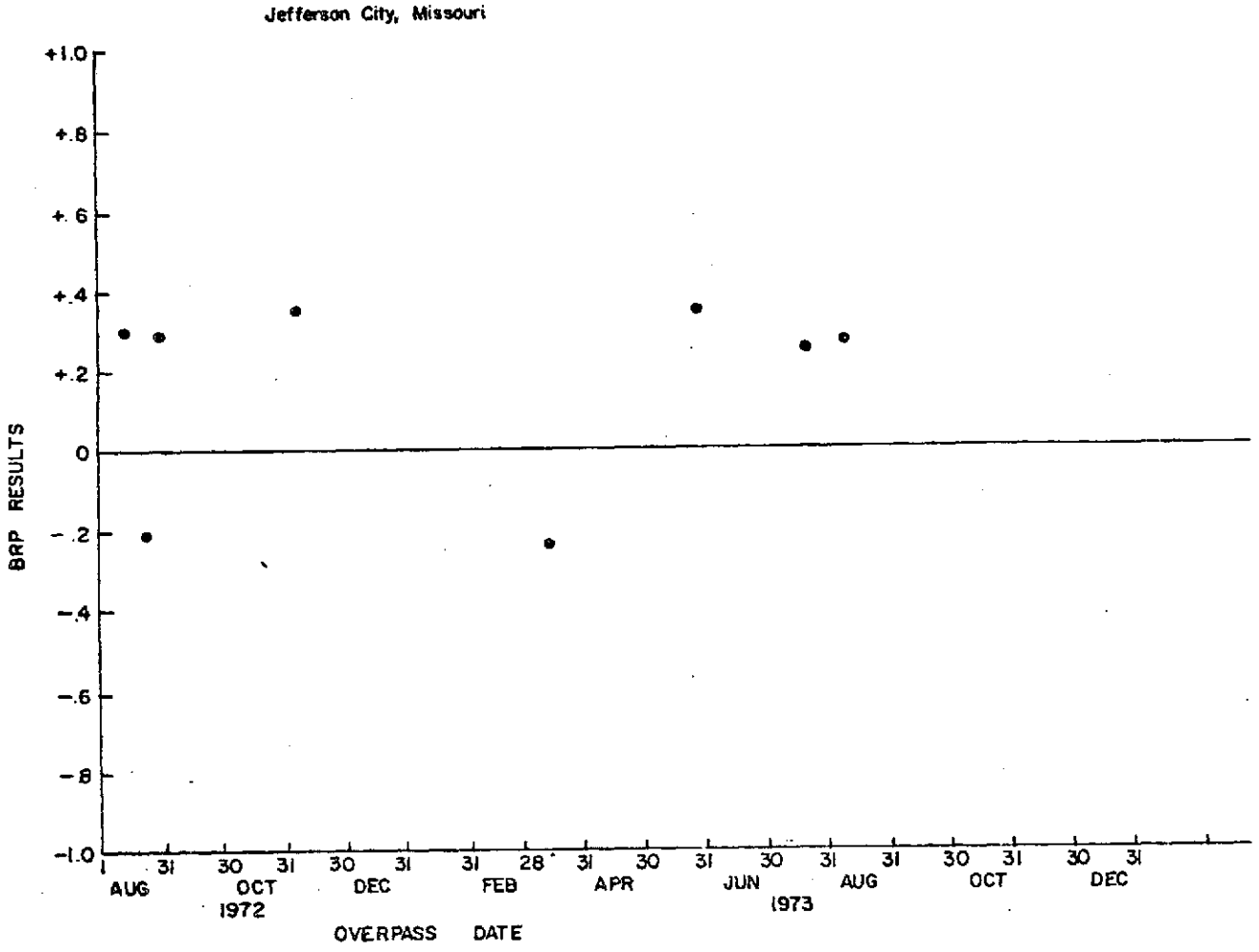
BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$



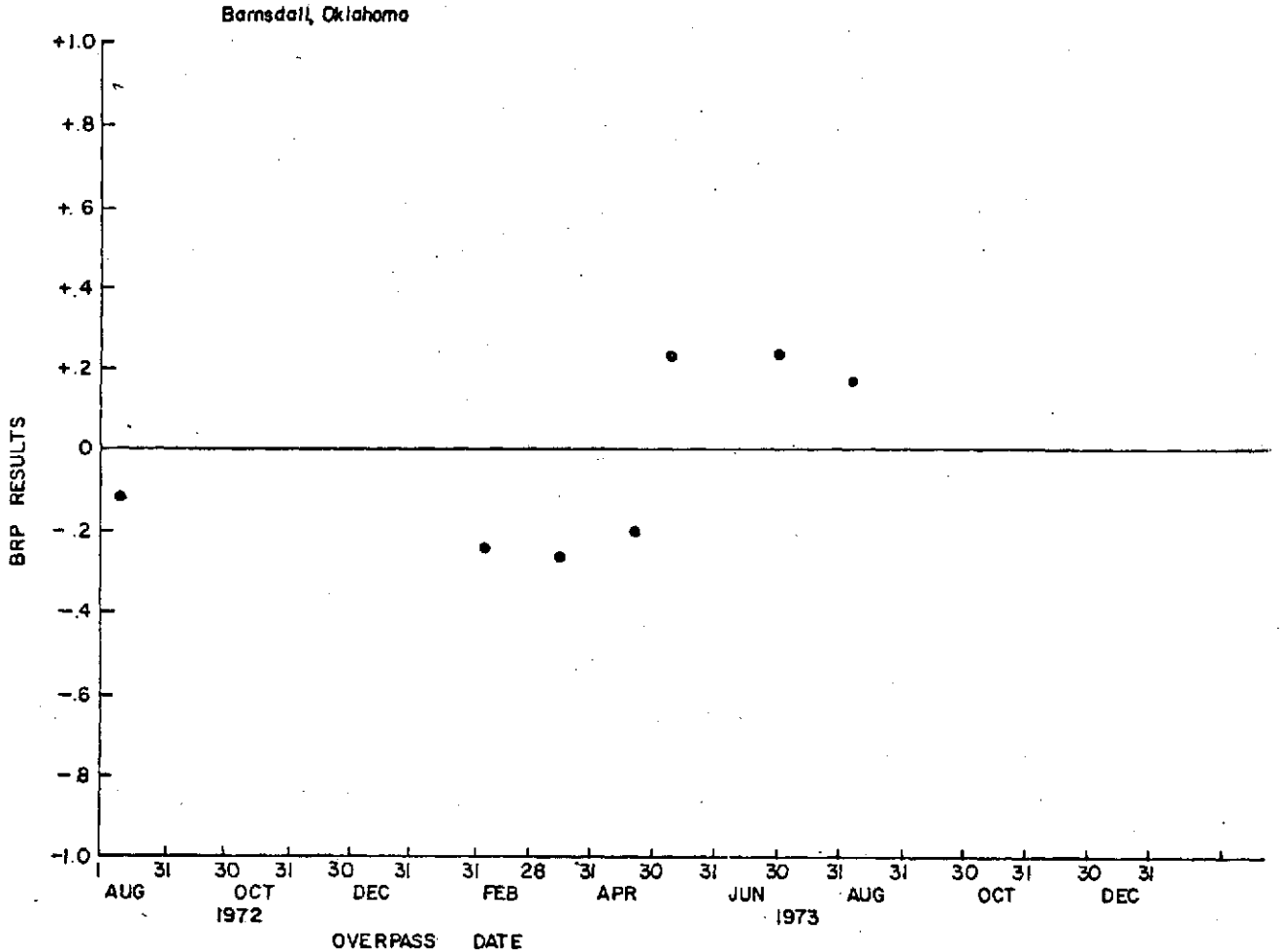
BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7\text{-}5}{\text{Bands } 7\text{+}5}$



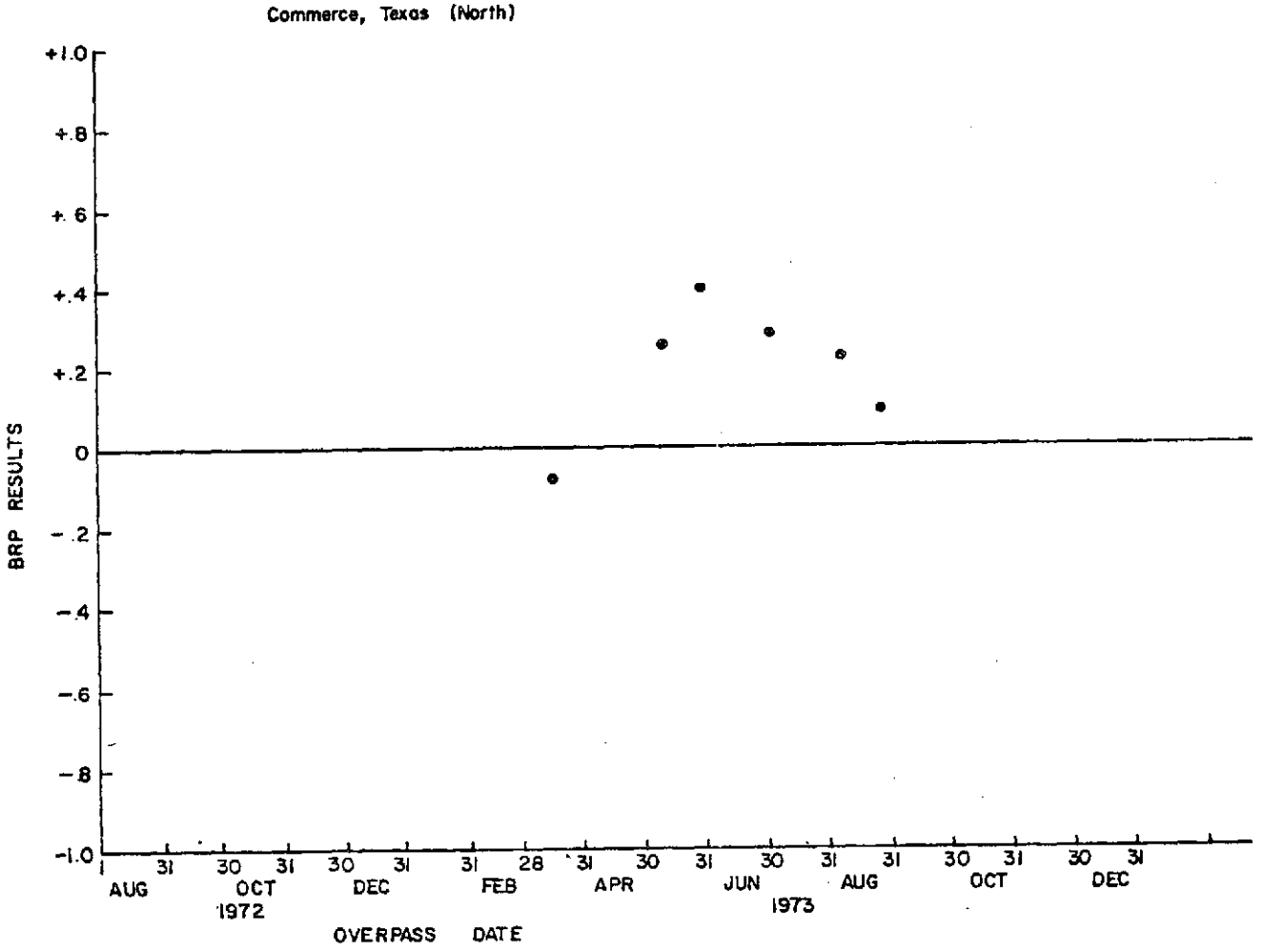
BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$



BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

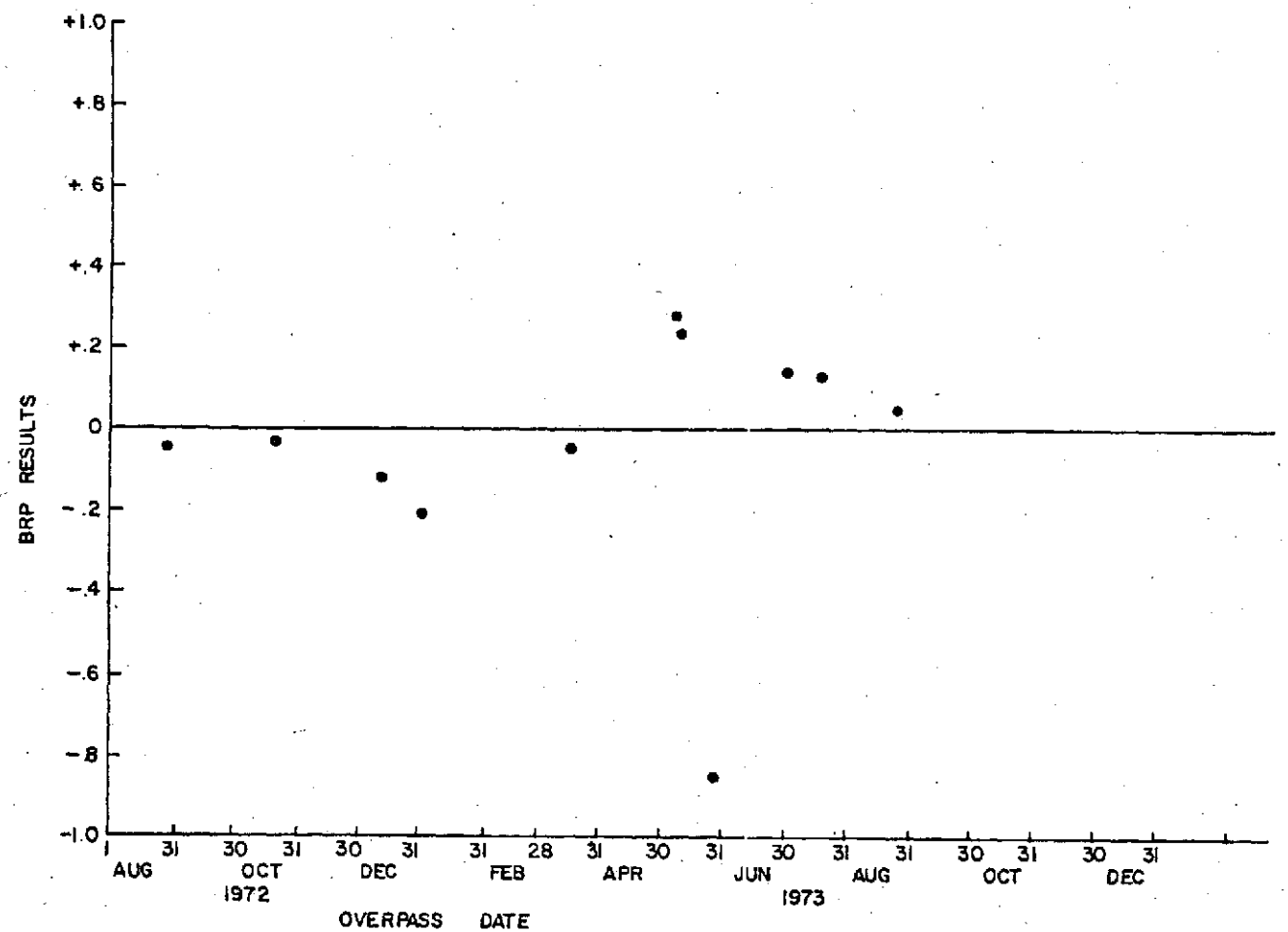


BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$



BAND RATIO PARAMETER GRAPH $BRP = \frac{\text{Bands } 7-5}{\text{Bands } 7+5}$

College Station, Texas (Central)



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# APPENDIX H

## SITE PROCESSING REPORTS FOR WESTERN CORRIDORS



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## ROCKY MOUNTAIN & COLUMBIA VALLEY

RM01 - Browning, Mt.

RM02 - Logan, Mt.

RM03 - Camas NWR, Id.

RM04 - Snoville, Ut.

RM05 - Kanosh, Ut.

RM06 - Colorado City, Arz.

CV07 - Havre, Mt.

CV08 - Charlo, Mt.

CV09 - Helmer, Id.

CV10 - Bickleton, Wa.

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1036-17565
DATE ACQUIRED: 28AUG72

CELLS 1646 TO 1650
LINES 1146 TO 1149
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 45 DEGREES***

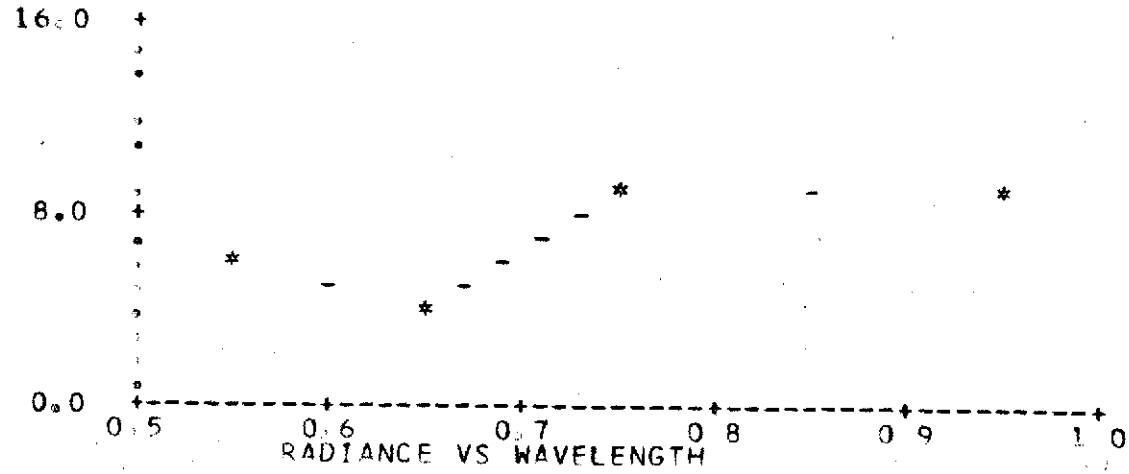
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.42 | 0.71 | .5 - .6 |
| BAND 5 | 4.00 | 0.99 | .6 - .7 |
| BAND 6 | 8.51 | 2.39 | .7 - .8 |
| BAND 7 | 8.84 | 3.26 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.844 | -0.472 | -0.492 |
| BAND 5 | 0.844 | 1.000 | -0.720 | -0.764 |
| BAND 6 | -0.472 | -0.720 | 1.000 | 0.990 |
| BAND 7 | -0.492 | -0.764 | 0.990 | 1.000 |

BAND RATIO PARAMETER 0.377
TRANSFORMED PARAMETER 0.937



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 23JUL73

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1036-17565
DATE ACQUIRED: 28AUG72

CELLS 1645 TO 1656
LINES 1155 TO 1159
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 45 DEGREES***

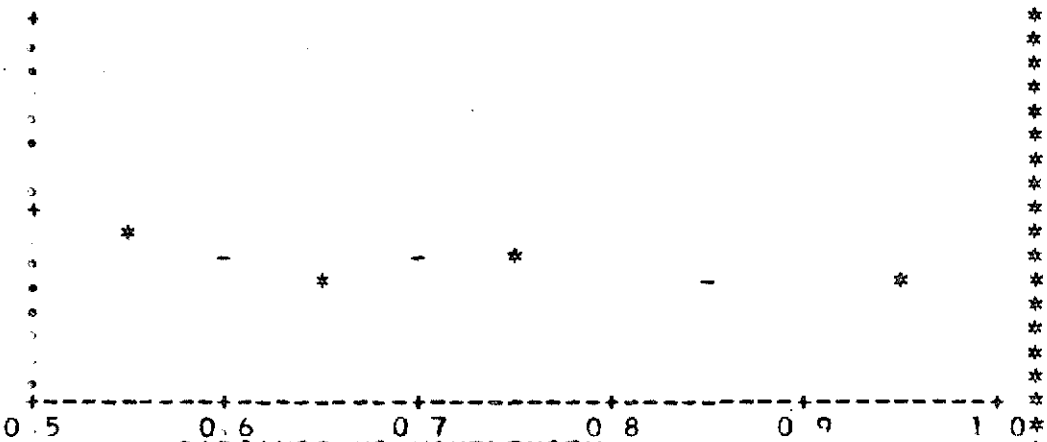
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.95 | 0.34 | .5 - .6 |
| BAND 5 | 4.74 | 0.31 | .6 - .7 |
| BAND 6 | 5.72 | 0.35 | .7 - .8 |
| BAND 7 | 5.47 | 0.39 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.594 | 0.345 | 0.420 |
| BAND 5 | 0.594 | 1.000 | 0.533 | 0.536 |
| BAND 6 | 0.345 | 0.533 | 1.000 | 0.693 |
| BAND 7 | 0.420 | 0.536 | 0.693 | 1.000 |

BAND RATIO PARAMETER 0.072
TRANSFORMED PARAMETER 0.756




RADIANCE VS WAVELENGTH

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1036-17565
DATE ACQUIRED: 28AUG72

CELLS 1655 TO 1656
LINES 1146 TO 1151
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 45 DEGREES***

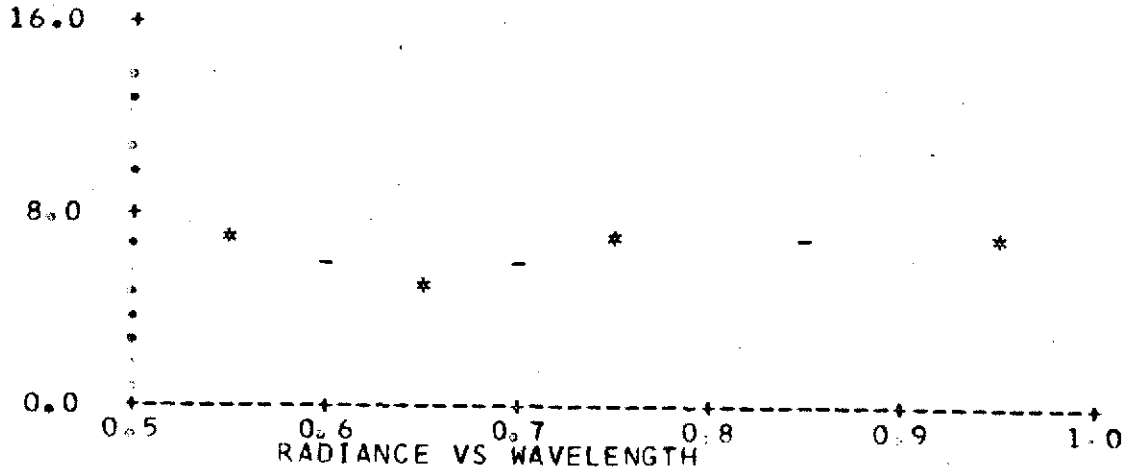
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.86 | 0.65 | .5 - .6 |
| BAND 5 | 4.83 | 0.70 | .6 - .7 |
| BAND 6 | 7.15 | 0.83 | .7 - .8 |
| BAND 7 | 7.30 | 1.27 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.884 | 0.713 | 0.701 |
| BAND 5 | 0.884 | 1.000 | 0.496 | 0.462 |
| BAND 6 | 0.713 | 0.496 | 1.000 | 0.940 |
| BAND 7 | 0.701 | 0.462 | 0.940 | 1.000 |

BAND RATIO PARAMETER 0.204
TRANSFORMED PARAMETER 0.839




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 23JUL73

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A CELLS 1583 TO 1586
IMAGE IDENTIFIER: 1072-17565 LINES 1319 TO 1323
DATE ACQUIRED: 030CT72 TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

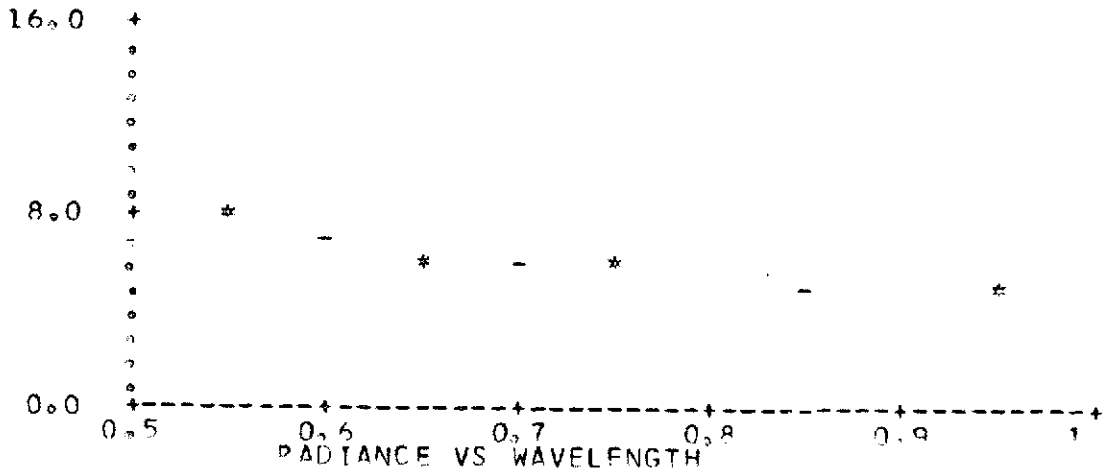
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.05 | 0.49 | .5 - .6 |
| BAND 5 | 6.19 | 0.38 | .6 - .7 |
| BAND 6 | 6.01 | 0.40 | .7 - .8 |
| BAND 7 | 5.33 | 0.53 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.543 | 0.595 | 0.471 |
| BAND 5 | 0.543 | 1.000 | 0.627 | 0.417 |
| BAND 6 | 0.595 | 0.627 | 1.000 | 0.723 |
| BAND 7 | 0.471 | 0.417 | 0.723 | 1.000 |

BAND RATIO PARAMETER -0.075
TRANSFORMED PARAMETER 0.652




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 26JUL73.

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1072-17565
DATE ACQUIRED: 030CT72

CELLS 1583 TO 1594
LINES 1328 TO 1333
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

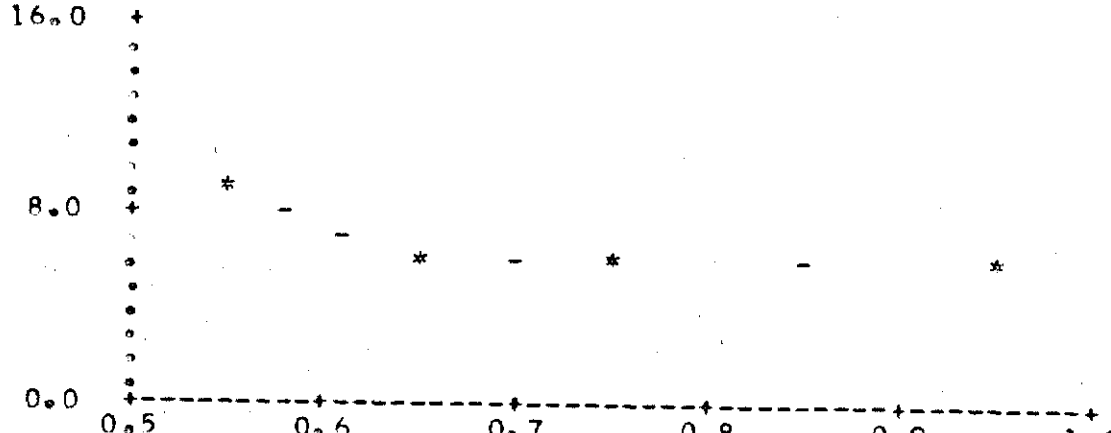
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.77 | 0.40 | .5 - .6 |
| BAND 5 | 6.44 | 0.36 | .6 - .7 |
| BAND 6 | 5.38 | 0.45 | .7 - .8 |
| BAND 7 | 5.64 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.480 | 0.307 | 0.252 |
| BAND 5 | 0.480 | 1.000 | 0.520 | 0.351 |
| BAND 6 | 0.307 | 0.520 | 1.000 | 0.519 |
| BAND 7 | 0.252 | 0.351 | 0.519 | 1.000 |

BAND RATIO PARAMETER -0.067
TRANSFORMED PARAMETER 0.658



RADIANCE VS WAVELENGTH

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1072-17565
DATE ACQUIRED: 030CT72

CELLS 1591 TO 1592
LINES 1319 TO 1324
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

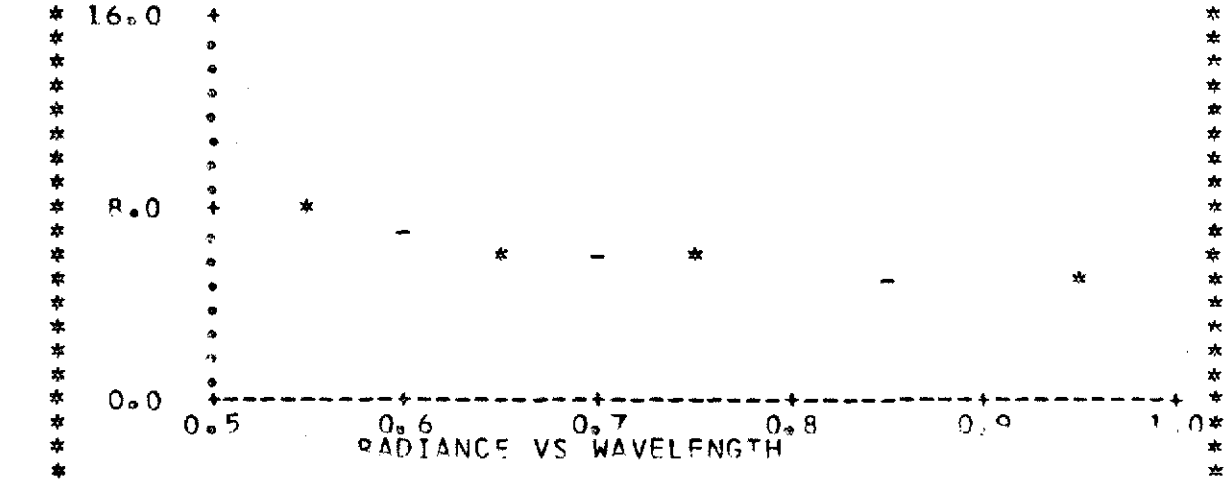
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.80 | 0.46 | .5 - .6 |
| BAND 5 | 5.81 | 0.36 | .6 - .7 |
| BAND 6 | 5.56 | 0.32 | .7 - .8 |
| BAND 7 | 4.91 | 0.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.356 | 0.640 | 0.191 |
| BAND 5 | 0.356 | 1.000 | 0.472 | 0.199 |
| BAND 6 | 0.640 | 0.472 | 1.000 | -0.000 |
| BAND 7 | 0.191 | 0.199 | -0.000 | 1.000 |

BAND RATIO PARAMETER -0.084
TRANSFORMED PARAMETER 0.645



RADIANCE VS WAVELENGTH

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1108-17573
DATE ACQUIRED: 08NOV72

CELLS 1775 TO 1778
LINES 1103 TO 1108
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 22 DEGREES***

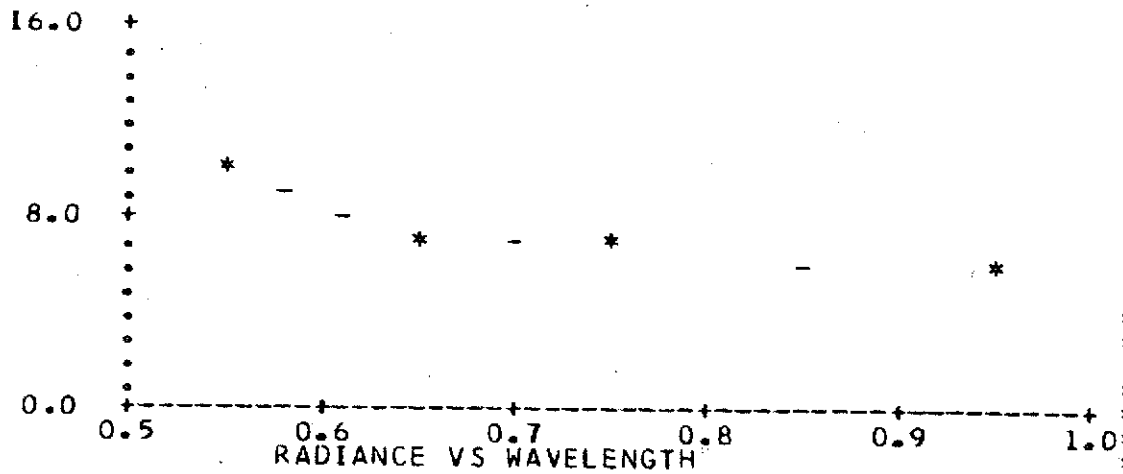
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.99 | 0.37 | .5 - .6 |
| BAND 5 | 7.08 | 0.46 | .6 - .7 |
| BAND 6 | 6.63 | 0.38 | .7 - .8 |
| BAND 7 | 5.70 | 0.47 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.265 | 0.203 | -0.186 |
| BAND 5 | 0.265 | 1.000 | 0.065 | -0.101 |
| BAND 6 | 0.203 | 0.065 | 1.000 | 0.212 |
| BAND 7 | -0.186 | -0.101 | 0.212 | 1.000 |

BAND RATIO PARAMETER -0.108
TRANSFORMED PARAMETER 0.626




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JUN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1108-17573
DATE ACQUIRED: 08NOV72

CELLS 1775 TO 1784
LINES 1112 TO 1116
TOTAL POINTS 50

***CORRECTED FOR SUN ELEVATION 22 DEGREES***

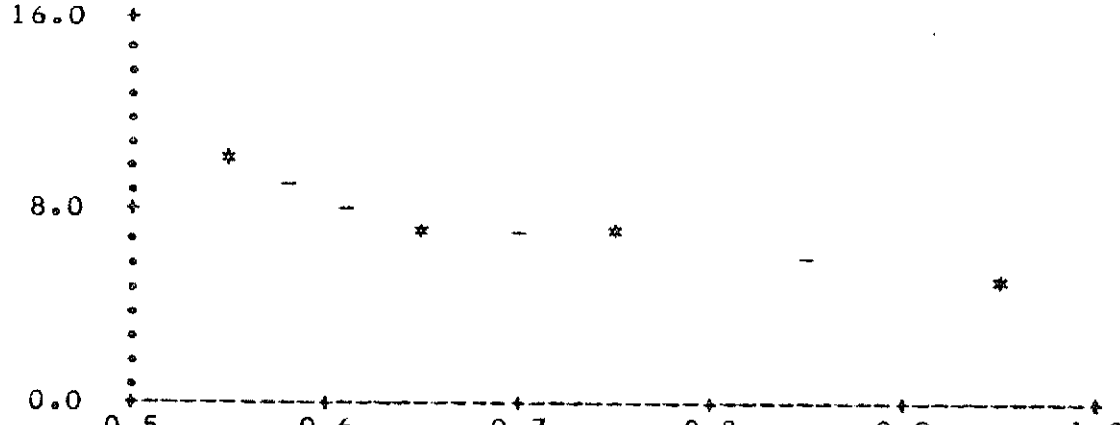
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.96 | 0.28 | .5 - .6 |
| BAND 5 | 7.15 | 0.50 | .6 - .7 |
| BAND 6 | 6.60 | 0.47 | .7 - .8 |
| BAND 7 | 5.42 | 0.43 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.408 | 0.290 | 0.351 |
| BAND 5 | 0.408 | 1.000 | 0.377 | 0.490 |
| BAND 6 | 0.290 | 0.377 | 1.000 | 0.313 |
| BAND 7 | 0.351 | 0.490 | 0.313 | 1.000 |

BAND RATIO PARAMETER -0.137
TRANSFORMED PARAMETER 0.602



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JUN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1108-17573
DATE ACQUIRED: 08NOV72

CELLS 1781 TO 1782
LINES 1102 TO 1109
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 22 DEGREES***

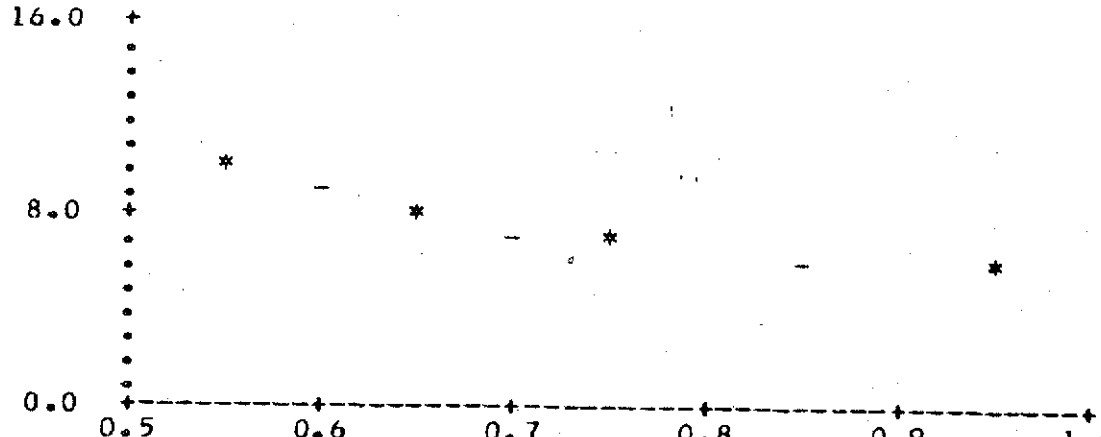
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.39 | 0.72 | .5 - .6 |
| BAND 5 | 7.83 | 0.72 | .6 - .7 |
| BAND 6 | 7.21 | 0.45 | .7 - .8 |
| BAND 7 | 6.00 | 0.56 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.748 | 0.337 | -0.098 |
| BAND 5 | 0.748 | 1.000 | 0.322 | -0.160 |
| BAND 6 | 0.337 | 0.322 | 1.000 | 0.257 |
| BAND 7 | -0.098 | -0.160 | 0.257 | 1.000 |

BAND RATIO PARAMETER -0.133
TRANSFORMED PARAMETER 0.606



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JUN74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1269-17521
DATE ACQUIRED: 18APR73

CELLS 203 TO 206
LINES 1637 TO 1641
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

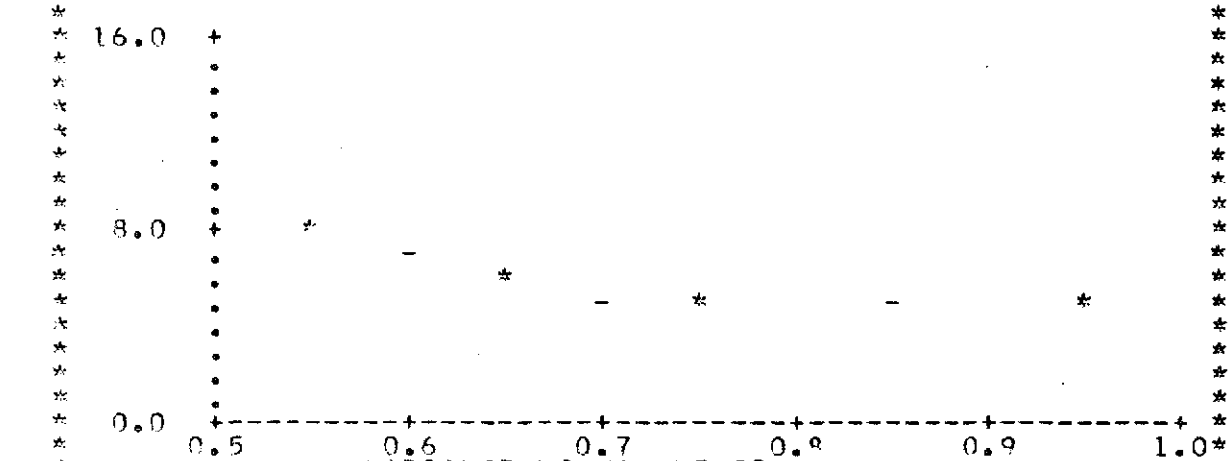
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.69 | 0.75 | .5 - .6 |
| BAND 5 | 5.93 | 0.82 | .6 - .7 |
| BAND 6 | 5.36 | 1.01 | .7 - .8 |
| BAND 7 | 4.95 | 0.84 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.921 | 0.891 | 0.881 |
| BAND 5 | 0.921 | 1.000 | 0.957 | 0.933 |
| BAND 6 | 0.891 | 0.957 | 1.000 | 0.963 |
| BAND 7 | 0.881 | 0.933 | 0.963 | 1.000 |

BAND RATIO PARAMETER -0.090
TRANSFORMED PARAMETER 0.640




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 20MAY74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: PM 1 P
IMAGE IDENTIFIER: 1269-17521
DATE ACQUIRED: 18APR73

CELLS 203 TO 214
LINES 1645 TO 1651
TOTAL POINTS 84

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

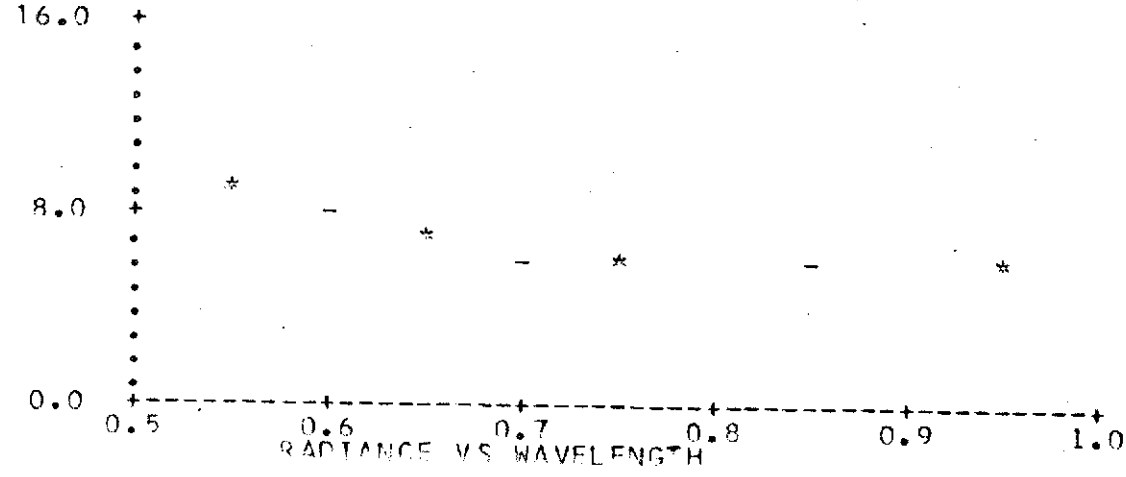
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.77 | 0.48 | .5 - .6 |
| BAND 5 | 6.80 | 0.43 | .6 - .7 |
| BAND 6 | 6.16 | 0.47 | .7 - .8 |
| BAND 7 | 5.57 | 0.43 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.735 | 0.771 | 0.736 |
| BAND 5 | 0.735 | 1.000 | 0.708 | 0.644 |
| BAND 6 | 0.771 | 0.708 | 1.000 | 0.802 |
| BAND 7 | 0.736 | 0.644 | 0.802 | 1.000 |

BAND RATIO PARAMETER -0.099
TRANSFORMED PARAMETER 0.633




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 20MAY74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: PM 1 W
IMAGE IDENTIFIER: 1269-17521
DATE ACQUIRED: 18APR73

CELLS 211 TO 212
LINES 1635 TO 1642
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

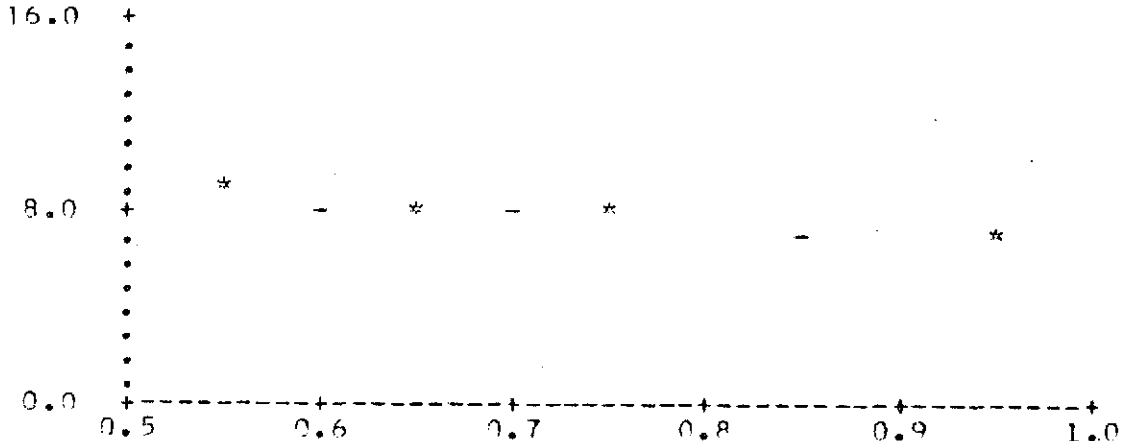
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.45 | 0.65 | .5 - .6 |
| BAND 5 | 8.24 | 0.93 | .6 - .7 |
| BAND 6 | 7.59 | 0.75 | .7 - .8 |
| BAND 7 | 6.91 | 0.89 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.780 | 0.606 | 0.579 |
| BAND 5 | 0.780 | 1.000 | 0.846 | 0.844 |
| BAND 6 | 0.606 | 0.846 | 1.000 | 0.939 |
| BAND 7 | 0.579 | 0.844 | 0.939 | 1.000 |

BAND RATIO PARAMETER -0.087
TRANSFORMED PARAMETER 0.642




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1323-17514
DATE ACQUIRED: 11JUN73

CELLS 213 TO 218
LINES 1711 TO 1716
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

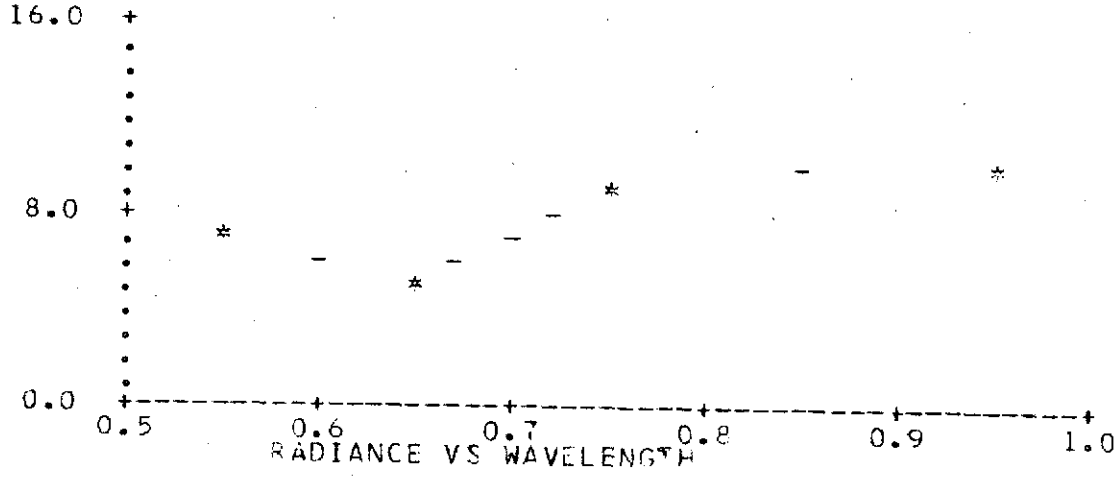
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.10 | 0.86 | .5 - .6 |
| BAND 5 | 4.85 | 1.05 | .6 - .7 |
| BAND 6 | 9.07 | 1.03 | .7 - .8 |
| BAND 7 | 9.68 | 1.57 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.954 | -0.438 | -0.627 |
| BAND 5 | 0.954 | 1.000 | -0.494 | -0.689 |
| BAND 6 | -0.438 | -0.494 | 1.000 | 0.935 |
| BAND 7 | -0.627 | -0.689 | 0.935 | 1.000 |

BAND RATIO PARAMETER 0.333
TRANSFORMED PARAMETER 0.912




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14MAY74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1323-17514
DATE ACQUIRED: 11JUN73

CELLS 213 TO 224
LINES 1721 TO 1726
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

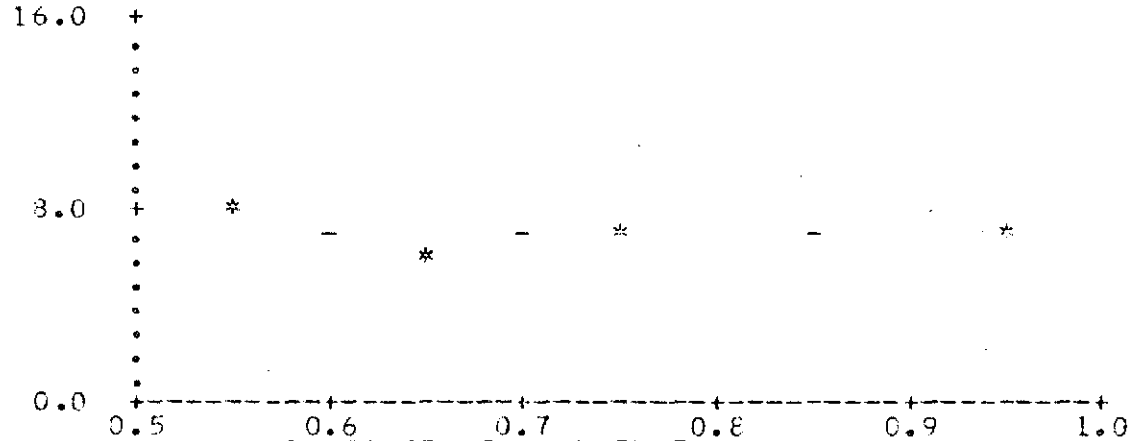
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.69 | 0.33 | .5 - .6 |
| BAND 5 | 5.67 | 0.36 | .6 - .7 |
| BAND 6 | 6.97 | 0.33 | .7 - .8 |
| BAND 7 | 6.61 | 0.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.548 | 0.239 | 0.171 |
| BAND 5 | 0.548 | 1.000 | 0.221 | 0.066 |
| BAND 6 | 0.239 | 0.221 | 1.000 | 0.664 |
| BAND 7 | 0.171 | 0.066 | 0.664 | 1.000 |

BAND RATIO PARAMETER 0.077
TRANSFORMED PARAMETER 0.759




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# EPTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1323-17514
DATE ACQUIRED: 11JUN73

CELLS 223 TO 224
LINES 1712 TO 1718
TOTAL POINTS 14

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

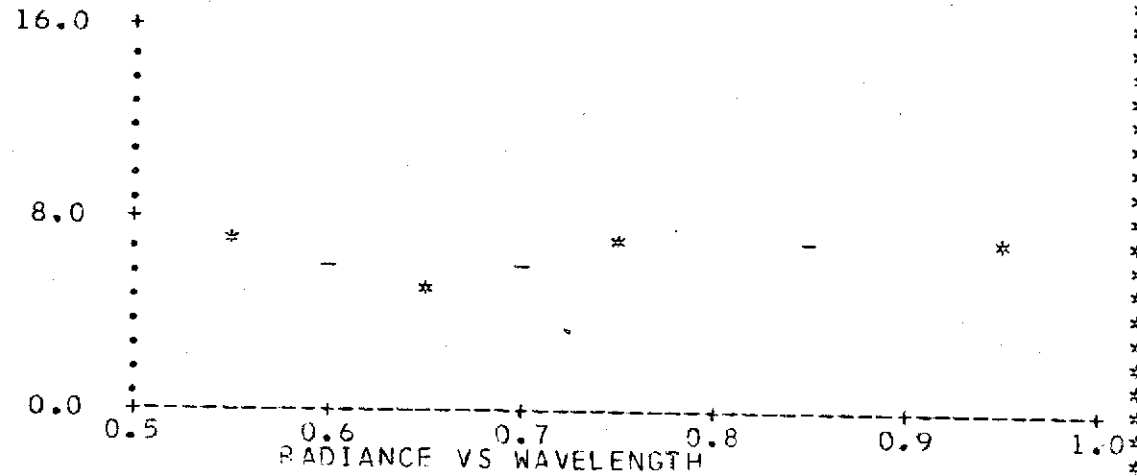
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.99 | 0.49 | .5 - .6 |
| BAND 5 | 5.03 | 0.48 | .6 - .7 |
| BAND 6 | 6.74 | 0.68 | .7 - .8 |
| BAND 7 | 6.69 | 0.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.887 | 0.644 | 0.231 |
| BAND 5 | 0.887 | 1.000 | 0.624 | 0.327 |
| BAND 6 | 0.644 | 0.624 | 1.000 | 0.812 |
| BAND 7 | 0.231 | 0.327 | 0.812 | 1.000 |

BAND RATIO PARAMETER 0.142
TRANSFORMED PARAMETER 0.801



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1360-17570
DATE ACQUIRED: 18JUL73

CELLS 1907 TO 1912
LINES 1179 TO 1183
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

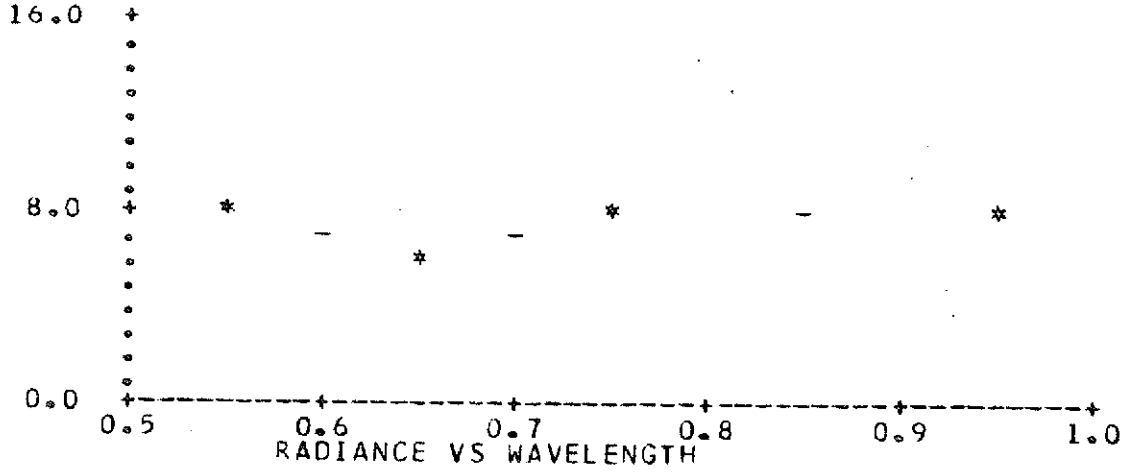
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.09 | 0.56 | .5 - .6 |
| BAND 5 | 6.26 | 0.95 | .6 - .7 |
| BAND 6 | 8.44 | 1.53 | .7 - .8 |
| BAND 7 | 8.20 | 2.25 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.727 | -0.124 | -0.229 |
| BAND 5 | 0.727 | 1.000 | -0.600 | -0.671 |
| BAND 6 | -0.124 | -0.600 | 1.000 | 0.982 |
| BAND 7 | -0.229 | -0.671 | 0.982 | 1.000 |

BAND RATIO PARAMETER 0.134
TRANSFORMED PARAMETER 0.796




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1360-17570
DATE ACQUIRED: 18JUL73

CELLS 1907 TO 1918
LINES 1188 TO 1193
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

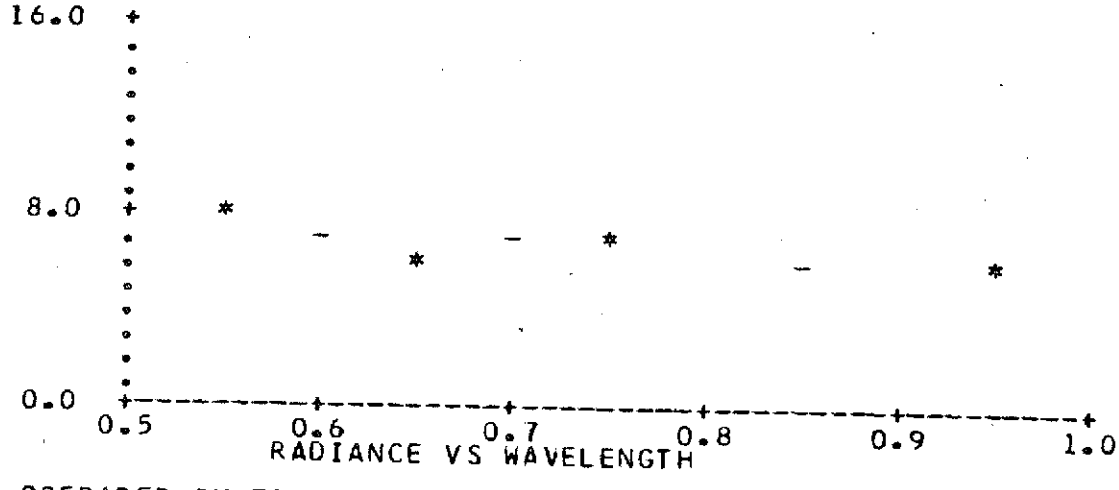
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.16 | 0.36 | .5 - .6 |
| BAND 5 | 6.49 | 0.30 | .6 - .7 |
| BAND 6 | 6.72 | 0.36 | .7 - .8 |
| BAND 7 | 6.00 | 0.37 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.566 | 0.451 | 0.316 |
| BAND 5 | 0.566 | 1.000 | 0.339 | 0.318 |
| BAND 6 | 0.451 | 0.339 | 1.000 | 0.657 |
| BAND 7 | 0.316 | 0.318 | 0.657 | 1.000 |

BAND RATIO PARAMETER -0.039
TRANSFORMED PARAMETER 0.679



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1360-17570
DATE ACQUIRED: 18JUL73

CELLS 1915 TO 1916
LINES 1179 TO 1185
TOTAL POINTS 14

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

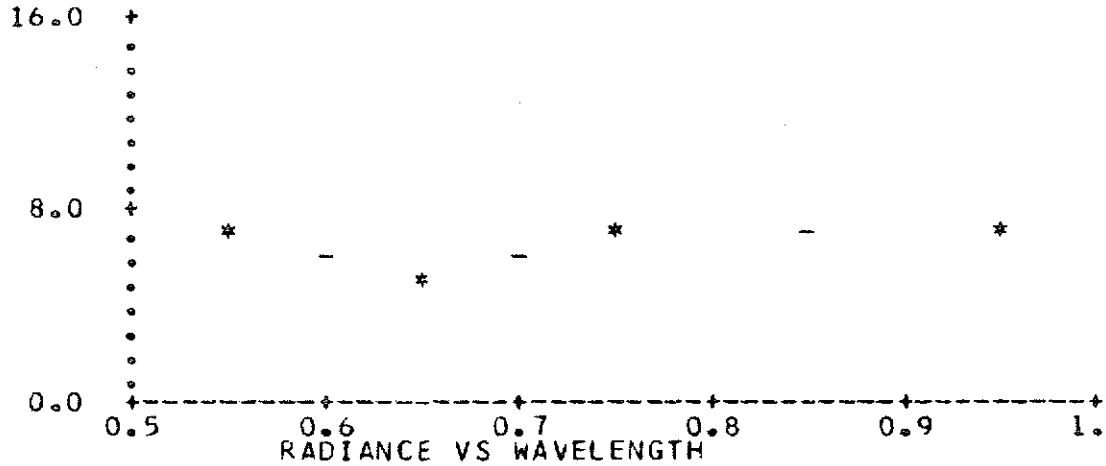
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.27 | 0.54 | .5 - .6 |
| BAND 5 | 5.26 | 0.74 | .6 - .7 |
| BAND 6 | 7.05 | 0.69 | .7 - .8 |
| BAND 7 | 6.88 | 1.06 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.893 | -0.875 | -0.845 |
| BAND 5 | 0.893 | 1.000 | -0.839 | -0.926 |
| BAND 6 | -0.875 | -0.839 | 1.000 | 0.878 |
| BAND 7 | -0.845 | -0.926 | 0.878 | 1.000 |

BAND RATIO PARAMETER 0.134
TRANSFORMED PARAMETER 0.796



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1377-17510
DATE ACQUIRED: 04AUG73

CELLS 195 TO 198
LINES 1496 TO 1500
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

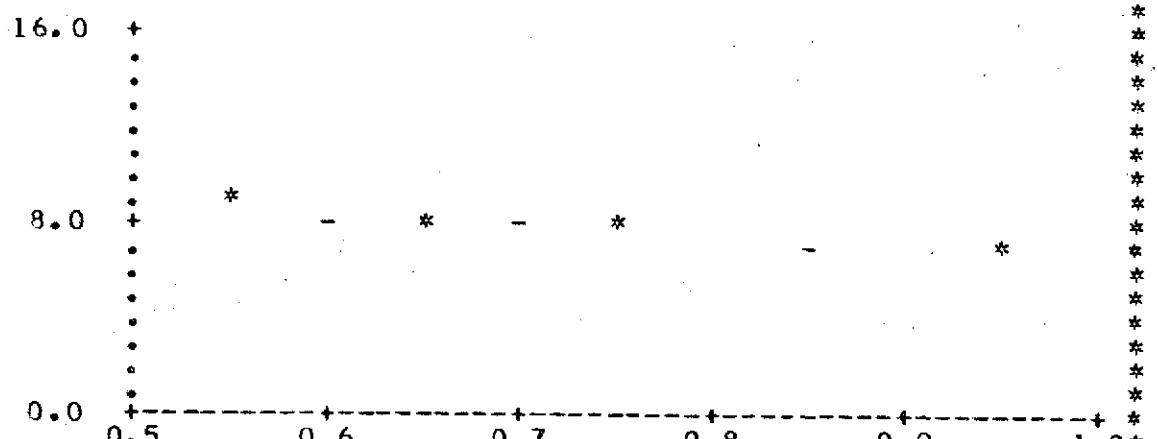
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.37 | 0.34 | .5 - .6 |
| BAND 5 | 8.31 | 0.60 | .6 - .7 |
| BAND 6 | 7.95 | 0.65 | .7 - .8 |
| BAND 7 | 6.93 | 0.71 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.685 | 0.292 | 0.268 |
| BAND 5 | 0.685 | 1.000 | 0.501 | 0.151 |
| BAND 6 | 0.292 | 0.501 | 1.000 | 0.800 |
| BAND 7 | 0.268 | 0.151 | 0.800 | 1.000 |

BAND RATIO PARAMETER -0.090
TRANSFORMED PARAMETER 0.640



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1377-17510
DATE ACQUIRED: 04AUG73

CELLS 193 TO 204
LINES 1505 TO 1510
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

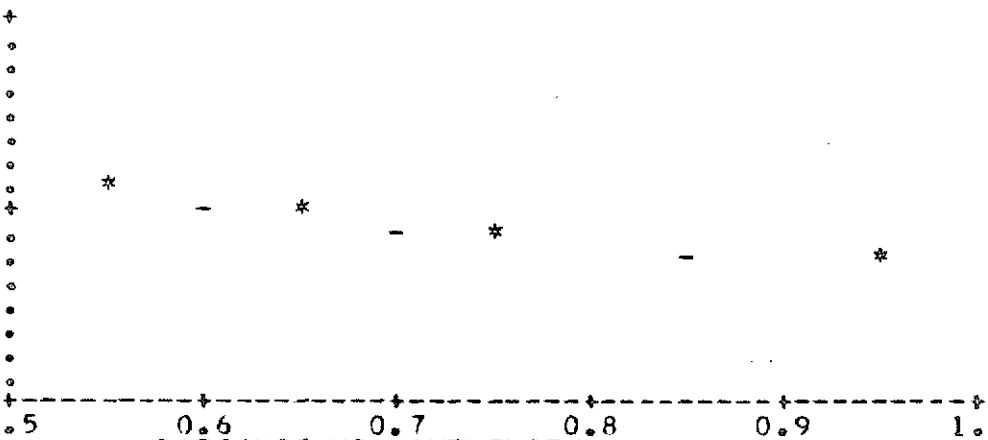
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.20 | 0.27 | .5 - .6 |
| BAND 5 | 7.94 | 0.57 | .6 - .7 |
| BAND 6 | 7.47 | 0.39 | .7 - .8 |
| BAND 7 | 6.35 | 0.36 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.494 | 0.422 | 0.286 |
| BAND 5 | 0.494 | 1.000 | 0.757 | 0.257 |
| BAND 6 | 0.422 | 0.757 | 1.000 | 0.512 |
| BAND 7 | 0.286 | 0.257 | 0.512 | 1.000 |

BAND RATIO PARAMETER -0.111
TRANSFORMED PARAMETER 0.624



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1377-17510
DATE ACQUIRED: 044UG73

CELLS 203 TO 204
LINES 1496 TO 1502
TOTAL POINTS 14

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

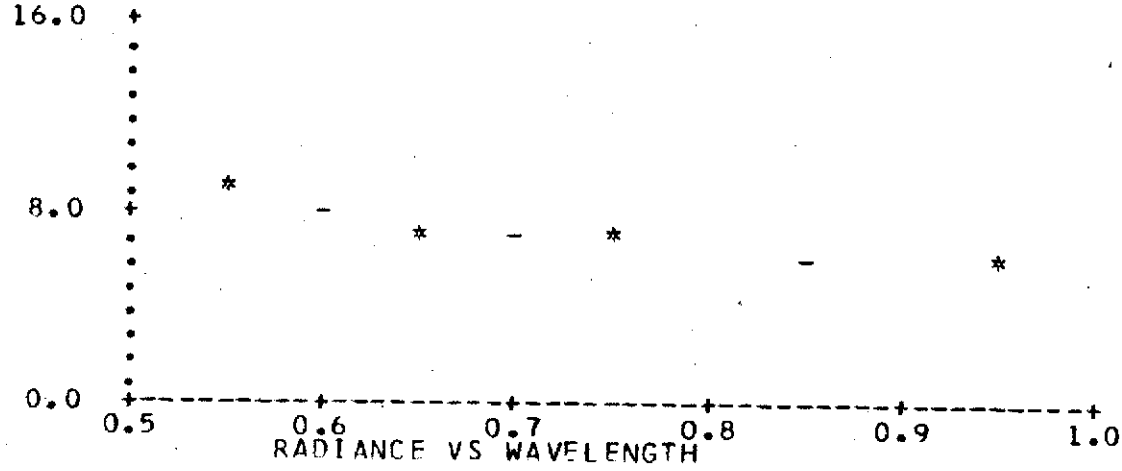
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.67 | 0.47 | .5 - .6 |
| BAND 5 | 6.98 | 0.50 | .6 - .7 |
| BAND 6 | 7.15 | 0.30 | .7 - .8 |
| BAND 7 | 6.30 | 0.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.761 | -0.628 | -0.728 |
| BAND 5 | 0.761 | 1.000 | -0.582 | -0.647 |
| BAND 6 | -0.628 | -0.582 | 1.000 | 0.765 |
| BAND 7 | -0.728 | -0.647 | 0.765 | 1.000 |

BAND RATIO PARAMETER -0.052
TRANSFORMED PARAMETER 0.670



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 A
IMAGE IDENTIFIER: 1414-17561
DATE ACQUIRED: 10SEP73

CELLS 1847 TO 1850
LINES 1289 TO 1292
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 41 DEGREES***

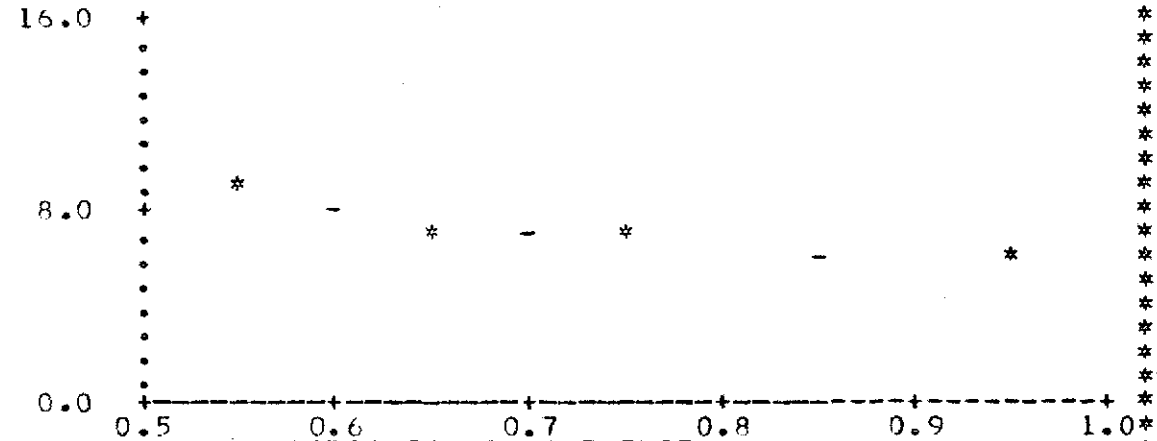
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.99 | 0.56 | .5 - .6 |
| BAND 5 | 7.49 | 0.47 | .6 - .7 |
| BAND 6 | 6.75 | 0.47 | .7 - .8 |
| BAND 7 | 5.81 | 0.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.743 | 0.520 | 0.546 |
| BAND 5 | 0.743 | 1.000 | 0.720 | 0.817 |
| BAND 6 | 0.520 | 0.720 | 1.000 | 0.875 |
| BAND 7 | 0.546 | 0.817 | 0.875 | 1.000 |

BAND RATIO PARAMETER -0.126
TRANSFORMED PARAMETER 0.611



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22FEB74

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OF POOR QUALITY

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 R
IMAGE IDENTIFIER: 1414-17561
DATE ACQUIRED: 10SEP73

CELLS 1845 TO 1858
LINES 1298 TO 1303
TOTAL POINTS 84

***CORRECTED FOR SUN ELEVATION 41 DEGREES***

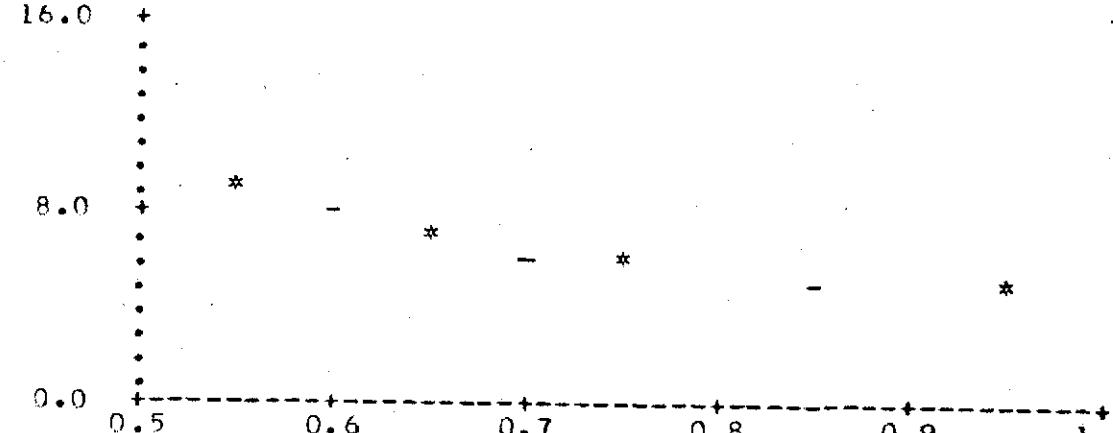
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.10 | 0.44 | .5 - .6 |
| BAND 5 | 7.49 | 0.45 | .6 - .7 |
| BAND 6 | 6.50 | 0.35 | .7 - .8 |
| BAND 7 | 5.49 | 0.41 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.558 | 0.439 | 0.307 |
| BAND 5 | 0.558 | 1.000 | 0.660 | 0.607 |
| BAND 6 | 0.439 | 0.660 | 1.000 | 0.569 |
| BAND 7 | 0.307 | 0.607 | 0.569 | 1.000 |

BAND RATIO PARAMETER -0.154
TRANSFORMED PARAMETER 0.588



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22FEB74

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OF POOR QUALITY.

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 1 W
IMAGE IDENTIFIER: 1414-17561
DATE ACQUIRED: 10SEP73

CELLS 1857 TO 1858
LINES 1289 TO 1294
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 41 DEGREES***

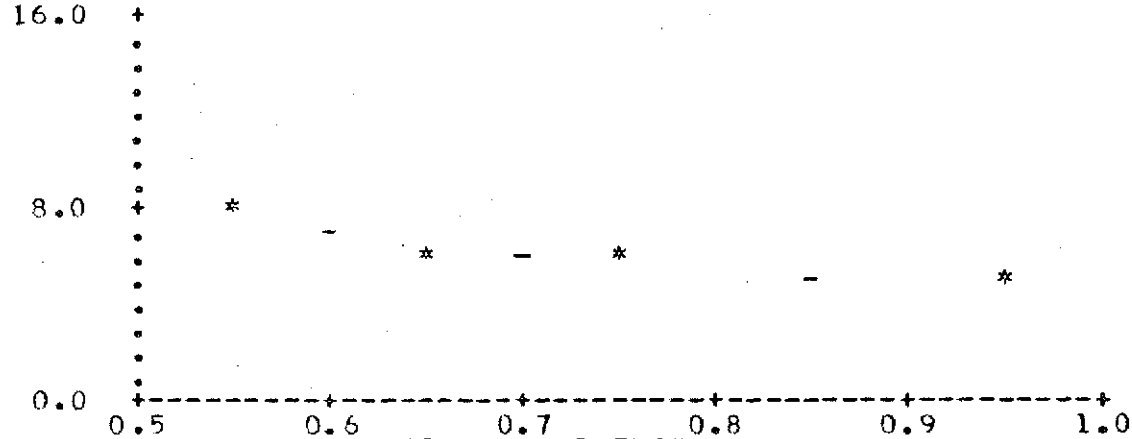
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.19 | 0.37 | .5 - .6 |
| BAND 5 | 6.48 | 0.20 | .6 - .7 |
| BAND 6 | 6.02 | 0.14 | .7 - .8 |
| BAND 7 | 5.03 | 0.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.343 | 0.434 | 0.284 |
| BAND 5 | 0.343 | 1.000 | 0.0 | 0.592 |
| BAND 6 | 0.434 | 0.0 | 1.000 | 0.225 |
| BAND 7 | 0.284 | 0.592 | 0.225 | 1.000 |

BAND RATIO PARAMETER -0.126
TRANSFORMED PARAMETER 0.611




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22FEB74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1034-17461
DATE ACQUIRED: 26AUG72

CELLS 1811 TO 1914
LINES 1347 TO 1352
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 48 DEGREES***

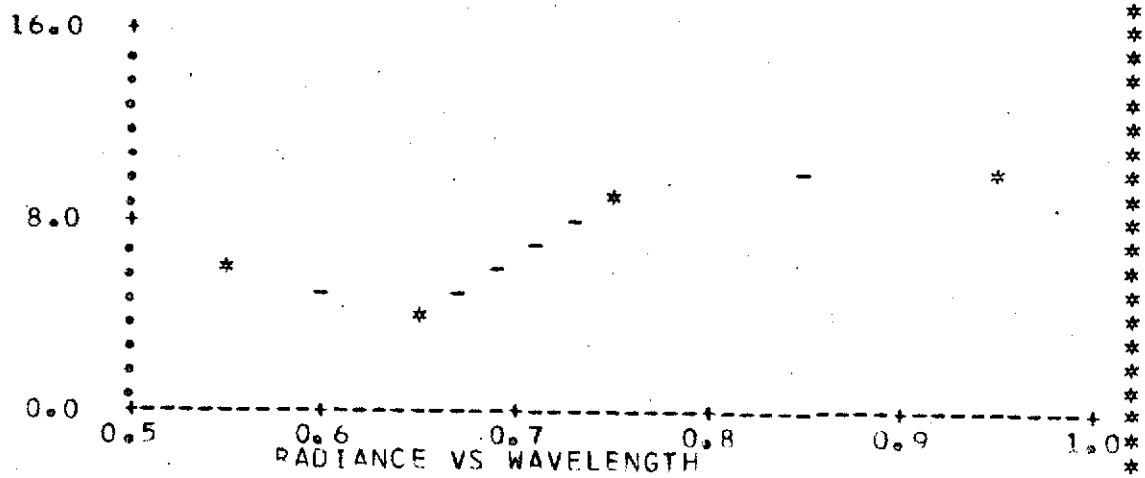
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.42 | 0.58 | .5 - .6 |
| BAND 5 | 3.85 | 0.85 | .6 - .7 |
| BAND 6 | 9.13 | 2.06 | .7 - .8 |
| BAND 7 | 10.01 | 2.67 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.843 | -0.367 | -0.386 |
| BAND 5 | 0.843 | 1.000 | -0.674 | -0.695 |
| BAND 6 | -0.367 | -0.674 | 1.000 | 0.986 |
| BAND 7 | -0.386 | -0.695 | 0.986 | 1.000 |

BAND RATIO PARAMETER 0.444
TRANSFORMED PARAMETER 0.972



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1034-17461
DATE ACQUIRED: 26AUG72

CELLS 1821 TO 1824
LINES 1347 TO 1352
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 48 DEGREES***

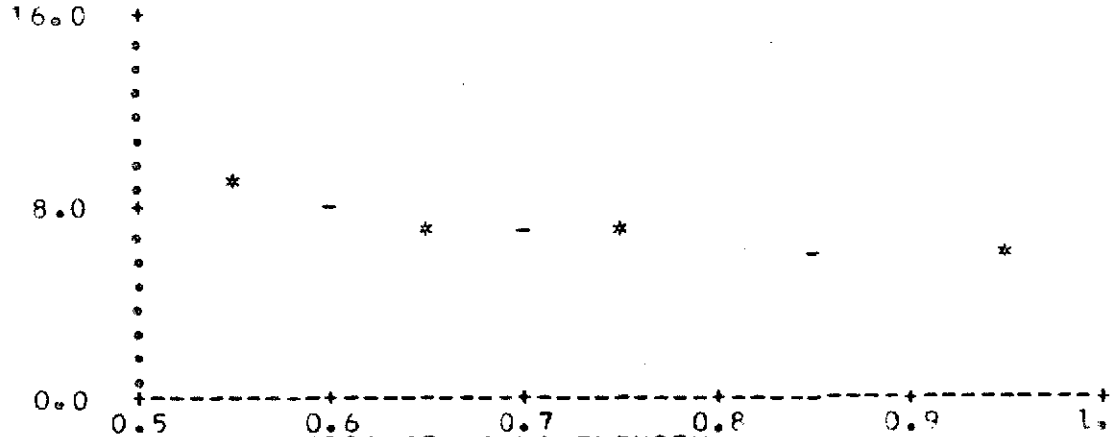
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.77 | 0.54 | .5 - .6 |
| BAND 5 | 7.08 | 0.50 | .6 - .7 |
| BAND 6 | 6.87 | 0.46 | .7 - .8 |
| BAND 7 | 6.06 | 0.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.787 | 0.467 | 0.354 |
| BAND 5 | 0.787 | 1.000 | 0.488 | 0.430 |
| BAND 6 | 0.467 | 0.488 | 1.000 | 0.678 |
| BAND 7 | 0.354 | 0.430 | 0.678 | 1.000 |

BAND RATIO PARAMETER -0.078
TRANSFORMED PARAMETER 0.650



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1034-17461
DATE ACQUIRED: 26AUG72

CELLS 1819 TO 1822
LINES 1342 TO 1345
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 48 DEGREES***

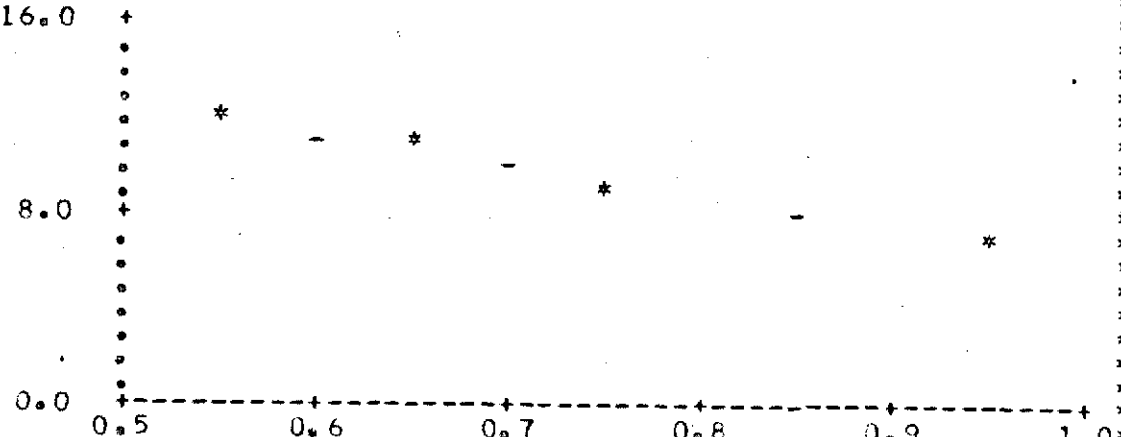
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.35 | 0.59 | .5 - .6 |
| BAND 5 | 11.05 | 0.46 | .6 - .7 |
| BAND 6 | 9.46 | 0.47 | .7 - .8 |
| BAND 7 | 7.50 | 0.30 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.481 | 0.659 | 0.351 |
| BAND 5 | 0.481 | 1.000 | 0.534 | 0.537 |
| BAND 6 | 0.659 | 0.534 | 1.000 | 0.563 |
| BAND 7 | 0.351 | 0.537 | 0.563 | 1.000 |

BAND RATIO PARAMETER -0.191
TRANSFORMED PARAMETER 0.555



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73



E-3

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1052-17461
DATE ACQUIRED: 13SEP72

CELLS 1745 TO 1750
LINES 1392 TO 1395
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

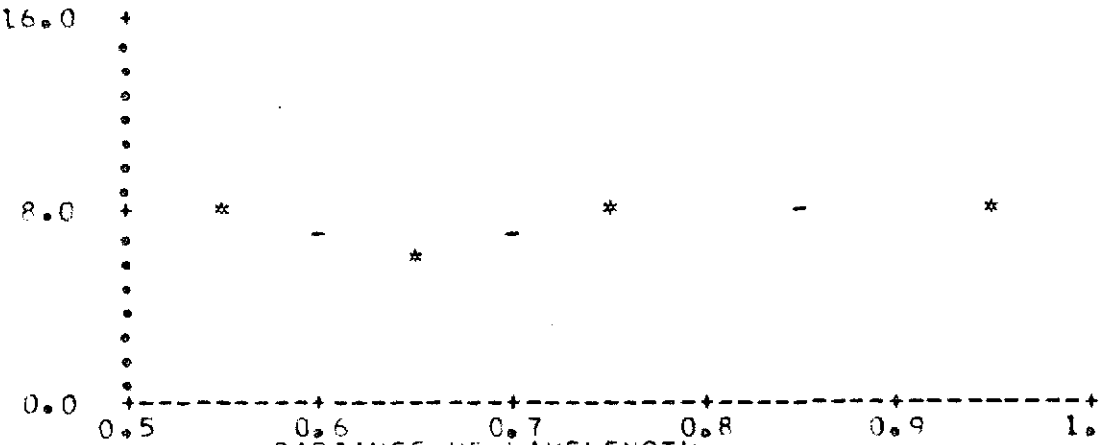
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.07 | 0.54 | .5 - .6 |
| BAND 5 | 6.00 | 0.70 | .6 - .7 |
| BAND 6 | 8.34 | 0.65 | .7 - .8 |
| BAND 7 | 8.14 | 0.72 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.860 | -0.151 | -0.632 |
| BAND 5 | 0.860 | 1.000 | -0.214 | -0.717 |
| BAND 6 | -0.151 | -0.214 | 1.000 | 0.712 |
| BAND 7 | -0.632 | -0.717 | 0.712 | 1.000 |

BAND RATIO PARAMETER 0.151
TRANSFORMED PARAMETER 0.807




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 19JUL73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1052-17461
DATE ACQUIRED: 13SEP72

CELLS 1753 TO 1759
LINES 1391 TO 1396
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

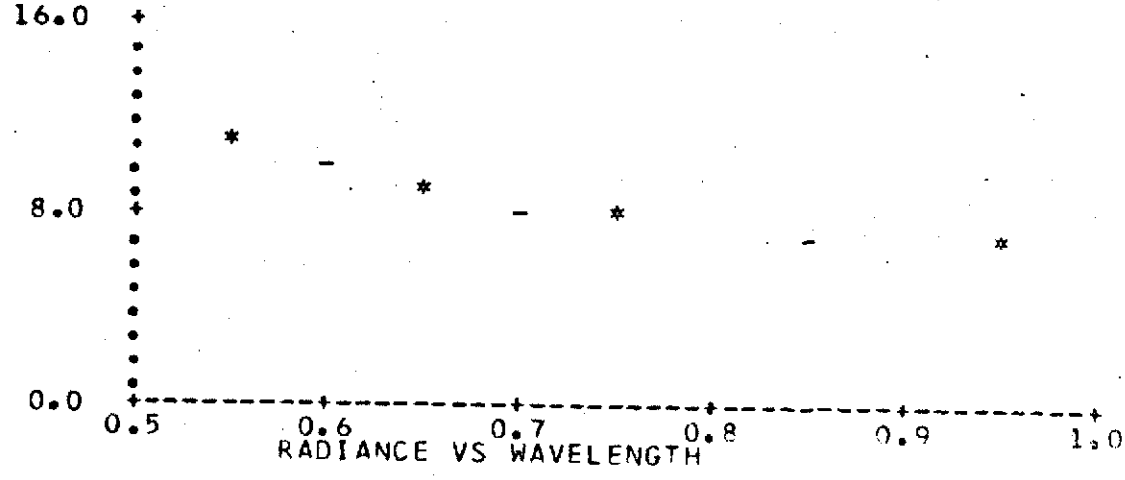
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.31 | 0.71 | .5 - .6 |
| BAND 5 | 9.50 | 0.78 | .6 - .7 |
| BAND 6 | 8.09 | 0.69 | .7 - .8 |
| BAND 7 | 6.60 | 0.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.870 | 0.657 | 0.550 |
| BAND 5 | 0.870 | 1.000 | 0.817 | 0.666 |
| BAND 6 | 0.657 | 0.817 | 1.000 | 0.842 |
| BAND 7 | 0.550 | 0.666 | 0.842 | 1.000 |

BAND RATIO PARAMETER -0.180
TRANSFORMED PARAMETER 0.566



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 18JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1052-17461
DATE ACQUIRED: 13SEP72

CELLS 1752 TO 1757
LINES 1386 TO 1389
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

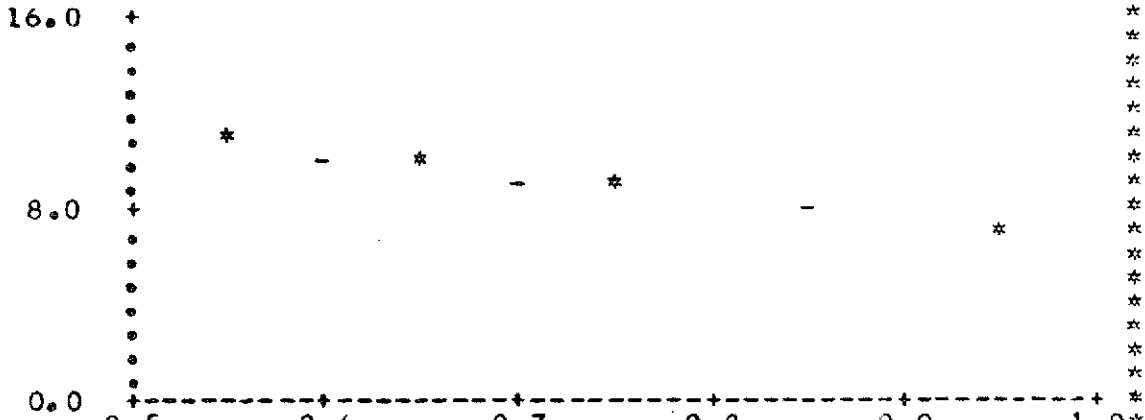
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.41 | 1.26 | .5 - .6 |
| BAND 5 | 9.97 | 1.67 | .6 - .7 |
| BAND 6 | 8.73 | 1.12 | .7 - .8 |
| BAND 7 | 7.29 | 1.05 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.953 | 0.932 | 0.923 |
| BAND 5 | 0.953 | 1.000 | 0.929 | 0.945 |
| BAND 6 | 0.932 | 0.929 | 1.000 | 0.943 |
| BAND 7 | 0.923 | 0.945 | 0.943 | 1.000 |

BAND RATIO PARAMETER -0.155
TRANSFORMED PARAMETER 0.587



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 18JUL73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1106-17465
DATE ACQUIRED: 06NOV72

CELLS 1857 TO 1860
LINES 1193 TO 1196
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 25 DEGREES***

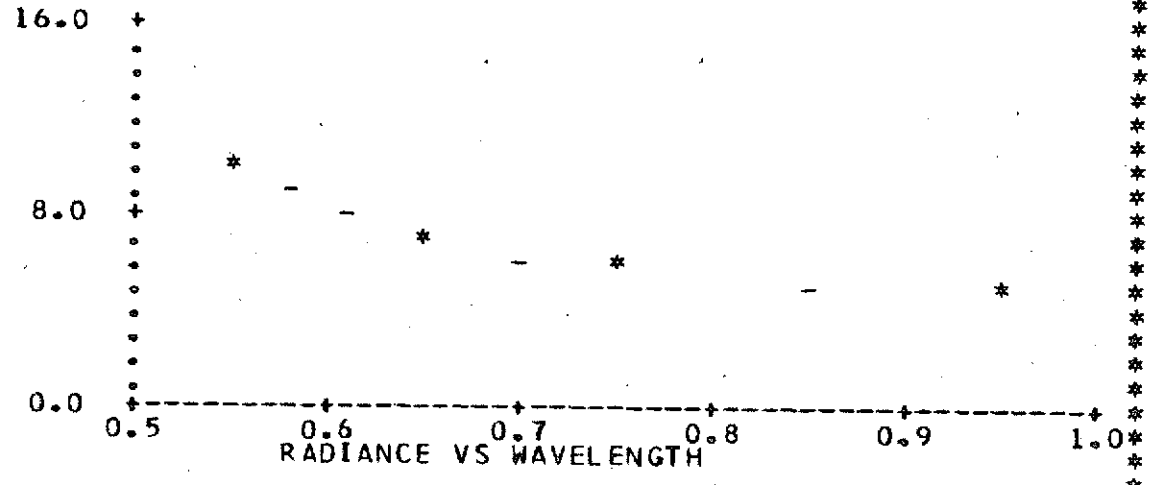
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.82 | 1.01 | .5 - .6 |
| BAND 5 | 7.10 | 1.04 | .6 - .7 |
| BAND 6 | 6.31 | 0.59 | .7 - .8 |
| BAND 7 | 5.21 | 0.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.952 | 0.780 | 0.625 |
| BAND 5 | 0.952 | 1.000 | 0.789 | 0.586 |
| BAND 6 | 0.780 | 0.789 | 1.000 | 0.609 |
| BAND 7 | 0.625 | 0.586 | 0.609 | 1.000 |

BAND RATIO PARAMETER -0.154
TRANSFORMED PARAMETER 0.588



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06MAR74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1106-17465
DATE ACQUIRED: 06NOV72

CELLS 1867 TO 1870
LINES 1193 TO 1197
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 25 DEGREES***

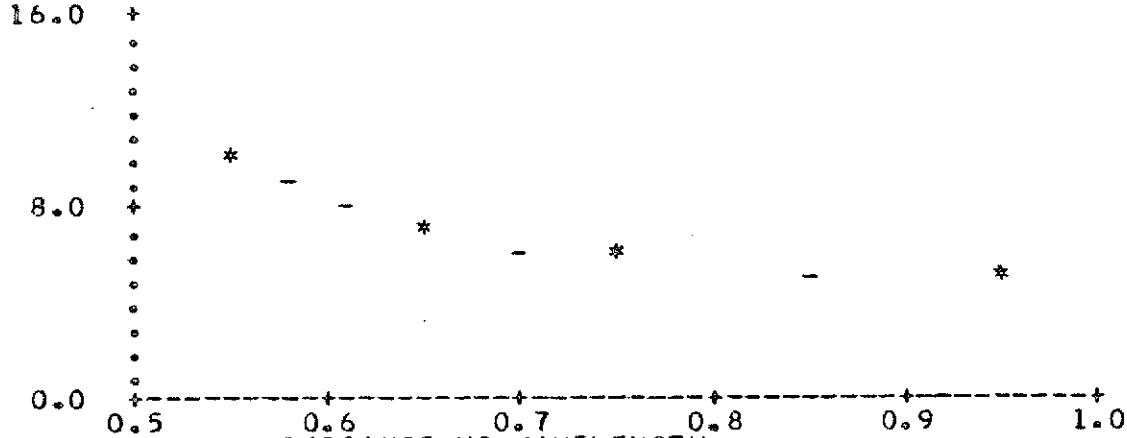
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.54 | 0.82 | .5 - .6 |
| BAND 5 | 6.56 | 0.96 | .6 - .7 |
| BAND 6 | 5.95 | 0.89 | .7 - .8 |
| BAND 7 | 4.51 | 0.70 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.911 | 0.918 | 0.720 |
| BAND 5 | 0.911 | 1.000 | 0.914 | 0.784 |
| BAND 6 | 0.918 | 0.914 | 1.000 | 0.802 |
| BAND 7 | 0.720 | 0.784 | 0.802 | 1.000 |

BAND RATIO PARAMETER -0.185
TRANSFORMED PARAMETER 0.561



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06MAR74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1106-17465
DATE ACQUIRED: 06NOV72

CELLS 1865 TO 1868
LINES 1187 TO 1190
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 25 DEGREES***

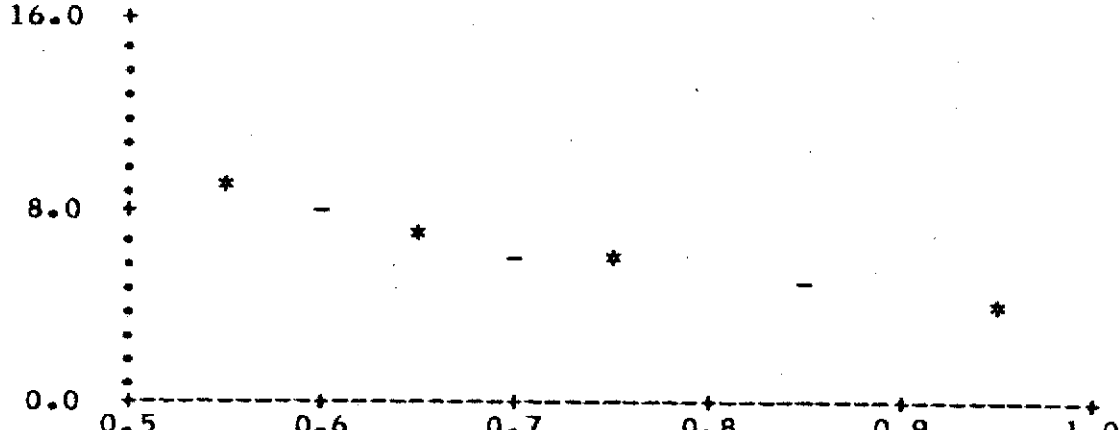
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.39 | 0.53 | .5 - .6 |
| BAND 5 | 6.68 | 0.76 | .6 - .7 |
| BAND 6 | 5.90 | 0.45 | .7 - .8 |
| BAND 7 | 4.45 | 0.54 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.066 | 0.257 | 0.708 |
| BAND 5 | 0.066 | 1.000 | 0.143 | 0.481 |
| BAND 6 | 0.257 | 0.143 | 1.000 | 0.577 |
| BAND 7 | 0.708 | 0.481 | 0.577 | 1.000 |

BAND RATIO PARAMETER -0.200
TRANSFORMED PARAMETER 0.547




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06MAR74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1250-17472
DATE ACQUIRED: 30MAR73

CELLS 2095 TO 2100
LINES 1513 TO 1517
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

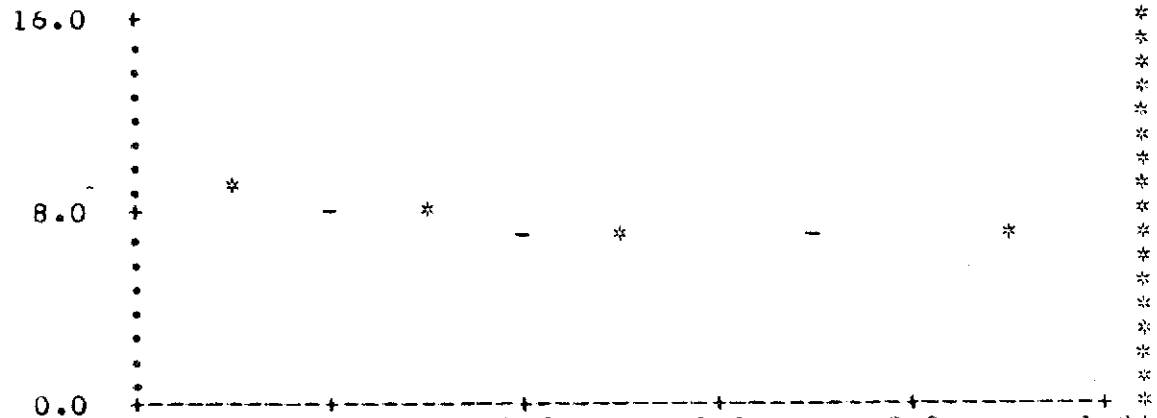
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.39 | 0.38 | .5 - .6 |
| BAND 5 | 7.56 | 0.52 | .6 - .7 |
| BAND 6 | 7.21 | 0.64 | .7 - .8 |
| BAND 7 | 6.61 | 0.60 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.566 | 0.640 | 0.477 |
| BAND 5 | 0.566 | 1.000 | 0.742 | 0.717 |
| BAND 6 | 0.640 | 0.742 | 1.000 | 0.882 |
| BAND 7 | 0.477 | 0.717 | 0.882 | 1.000 |

BAND RATIO PARAMETER -0.068
TRANSFORMED PARAMETER 0.658




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 06NOV73

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# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1250-17472
DATE ACQUIRED: 30MAR73

CELLS 2103 TO 2108
LINES 1512 TO 1518
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

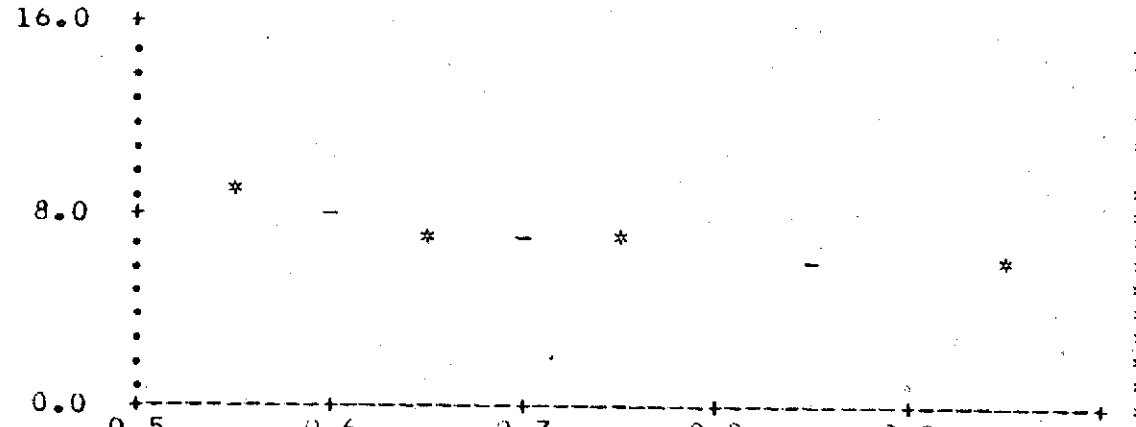
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.20 | 0.39 | .5 - .6 |
| BAND 5 | 7.03 | 0.47 | .6 - .7 |
| BAND 6 | 6.60 | 0.42 | .7 - .8 |
| BAND 7 | 5.96 | 0.38 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.506 | 0.325 | 0.149 |
| BAND 5 | 0.506 | 1.000 | 0.700 | 0.520 |
| BAND 6 | 0.325 | 0.700 | 1.000 | 0.669 |
| BAND 7 | 0.149 | 0.520 | 0.669 | 1.000 |

BAND RATIO PARAMETER -0.082
TRANSFORMED PARAMETER 0.646



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 06NOV73

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# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1250-17472
DATE ACQUIRED: 30MAR73

CELLS 2101 TO 2106
LINES 1507 TO 1510
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

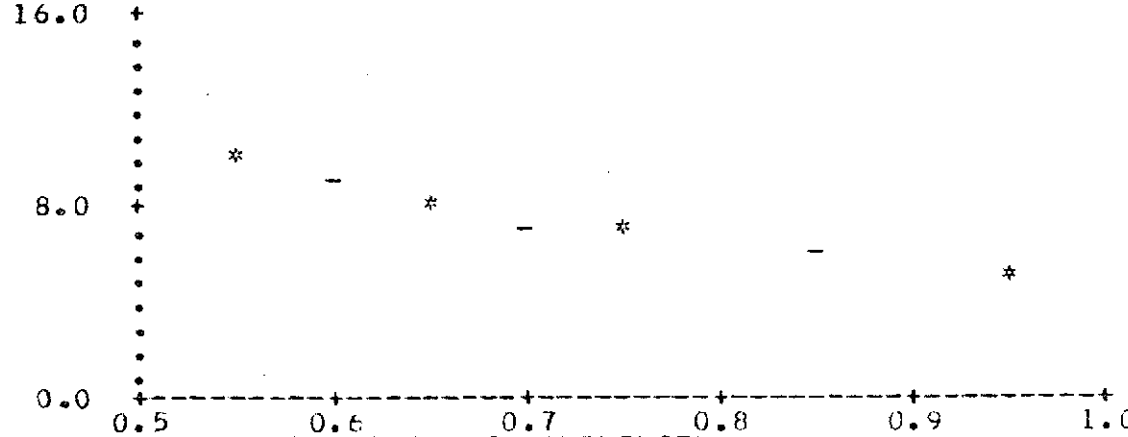
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.91 | 0.37 | .5 - .6 |
| BAND 5 | 7.77 | 0.39 | .6 - .7 |
| BAND 6 | 6.57 | 0.33 | .7 - .8 |
| BAND 7 | 5.35 | 0.36 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.452 | 0.529 | 0.269 |
| BAND 5 | 0.452 | 1.000 | 0.456 | 0.606 |
| BAND 6 | 0.529 | 0.456 | 1.000 | 0.721 |
| BAND 7 | 0.269 | 0.606 | 0.721 | 1.000 |

BAND RATIO PARAMETER -0.184
TRANSFORMED PARAMETER 0.562



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1321-17410
DATE ACQUIRED: 09JUN73

CELLS 269 TO 274
LINES 1901 TO 1905
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

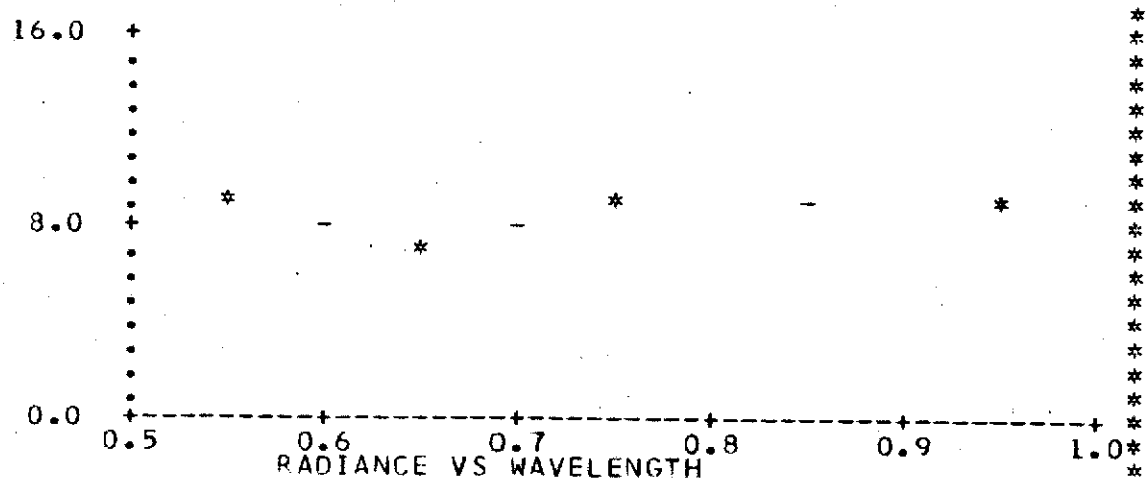
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.83 | 0.95 | .5 - .6 |
| BAND 5 | 6.69 | 1.26 | .6 - .7 |
| BAND 6 | 9.14 | 1.39 | .7 - .8 |
| BAND 7 | 8.66 | 1.87 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.964 | 0.018 | -0.206 |
| BAND 5 | 0.964 | 1.000 | -0.083 | -0.304 |
| BAND 6 | 0.018 | -0.083 | 1.000 | 0.951 |
| BAND 7 | -0.206 | -0.304 | 0.951 | 1.000 |

BAND RATIO PARAMETER 0.129
TRANSFORMED PARAMETER 0.793



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 12FEB74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1321-17410
DATE ACQUIRED: 09JUN73

CELLS 279 TO 284
LINES 1895 TO 1898
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

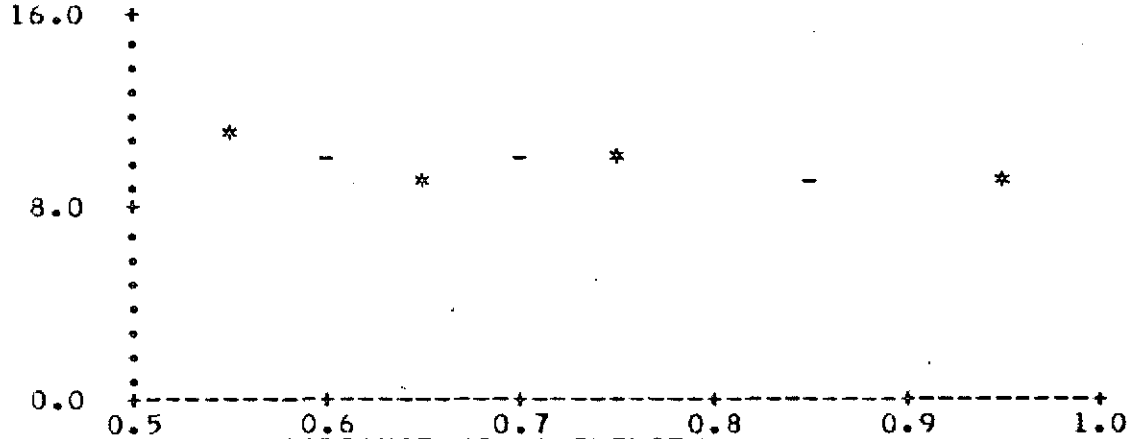
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.76 | 1.37 | .5 - .6 |
| BAND 5 | 8.65 | 1.58 | .6 - .7 |
| BAND 6 | 10.07 | 0.70 | .7 - .8 |
| BAND 7 | 8.74 | 0.57 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.964 | 0.730 | 0.469 |
| BAND 5 | 0.964 | 1.000 | 0.688 | 0.439 |
| BAND 6 | 0.730 | 0.688 | 1.000 | 0.775 |
| BAND 7 | 0.469 | 0.439 | 0.775 | 1.000 |

BAND RATIO PARAMETER 0.005
TRANSFORMED PARAMETER 0.711



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 12FEB74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1321-17410
DATE ACQUIRED: 09JUN73

CELLS 277 TO 282
LINES 1900 TO 1905
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

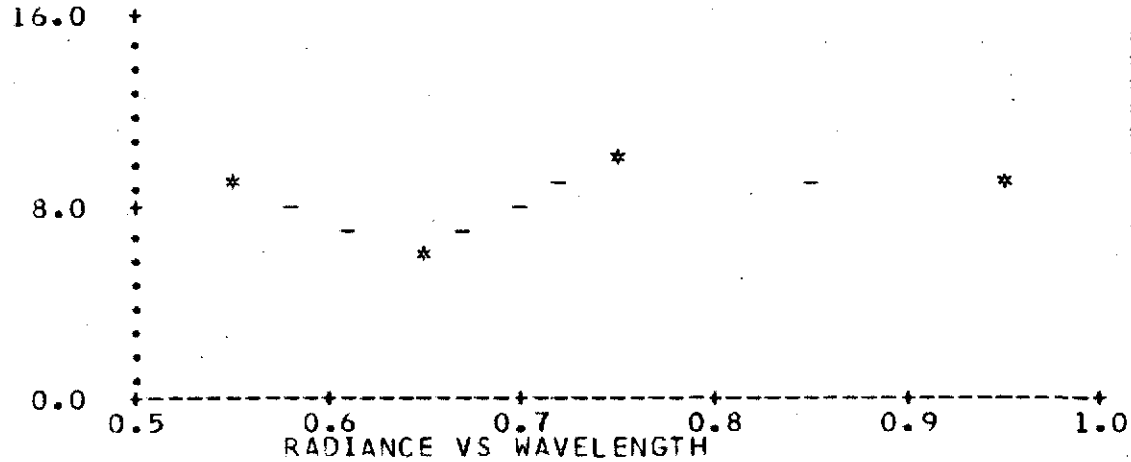
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.61 | 0.96 | .5 - .6 |
| BAND 5 | 6.06 | 1.18 | .6 - .7 |
| BAND 6 | 9.80 | 1.72 | .7 - .8 |
| BAND 7 | 9.33 | 2.14 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.894 | 0.321 | 0.197 |
| BAND 5 | 0.894 | 1.000 | 0.083 | -0.043 |
| BAND 6 | 0.321 | 0.083 | 1.000 | 0.980 |
| BAND 7 | 0.197 | -0.043 | 0.980 | 1.000 |

BAND RATIO PARAMETER 0.212
TRANSFORMED PARAMETER 0.844



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 12FEB74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1339-17405
DATE ACQUIRED: 27JUN73

CELLS 235 TO 238
LINES 1863 TO 1867
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

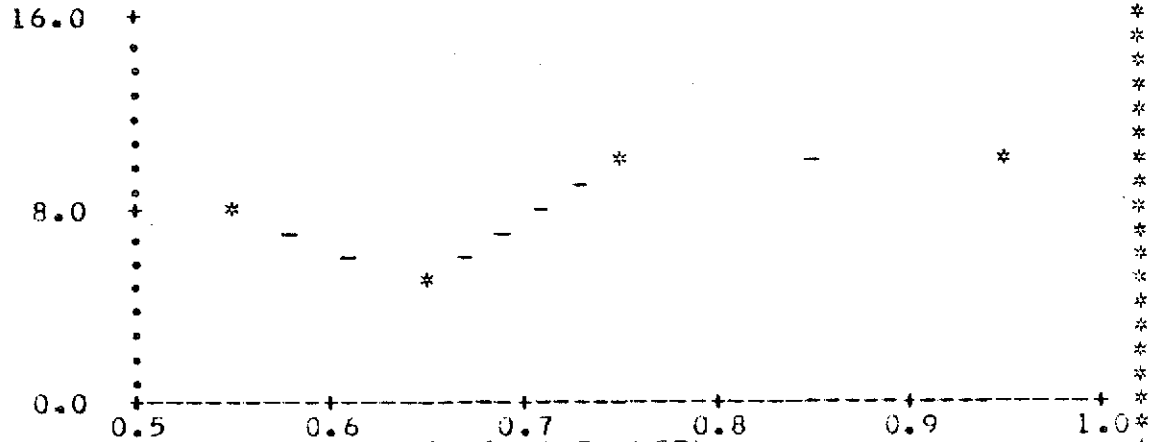
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.89 | 0.80 | .5 - .6 |
| BAND 5 | 5.04 | 0.96 | .6 - .7 |
| BAND 6 | 9.95 | 1.65 | .7 - .8 |
| BAND 7 | 9.93 | 2.23 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.922 | -0.533 | -0.604 |
| BAND 5 | 0.922 | 1.000 | -0.574 | -0.672 |
| BAND 6 | -0.533 | -0.574 | 1.000 | 0.976 |
| BAND 7 | -0.604 | -0.672 | 0.976 | 1.000 |

BAND RATIO PARAMETER 0.326
TRANSFORMED PARAMETER 0.909



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1339-17405
DATE ACQUIRED: 27JUN73

CELLS 243 TO 248
LINES 1862 TO 1868
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

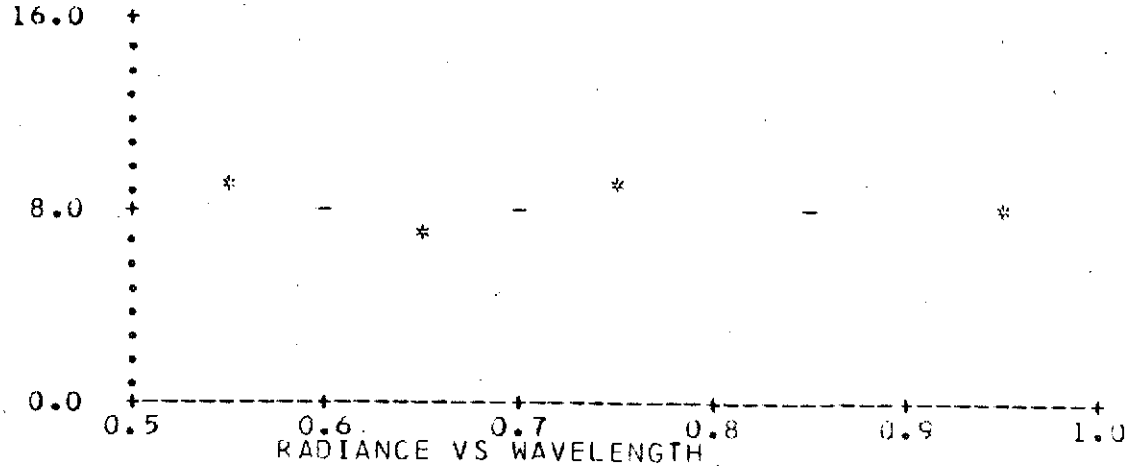
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.13 | 0.59 | .5 - .6 |
| BAND 5 | 7.01 | 0.74 | .6 - .7 |
| BAND 6 | 9.23 | 0.50 | .7 - .8 |
| BAND 7 | 8.31 | 0.69 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.864 | -0.456 | -0.618 |
| BAND 5 | 0.864 | 1.000 | -0.551 | -0.741 |
| BAND 6 | -0.456 | -0.551 | 1.000 | 0.868 |
| BAND 7 | -0.618 | -0.741 | 0.868 | 1.000 |

BAND RATIO PARAMETER 0.085
TRANSFORMED PARAMETER 0.765



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1339-17405
DATE ACQUIRED: 27JUN73

CELLS 241 TO 246
LINES 1857 TO 1860
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

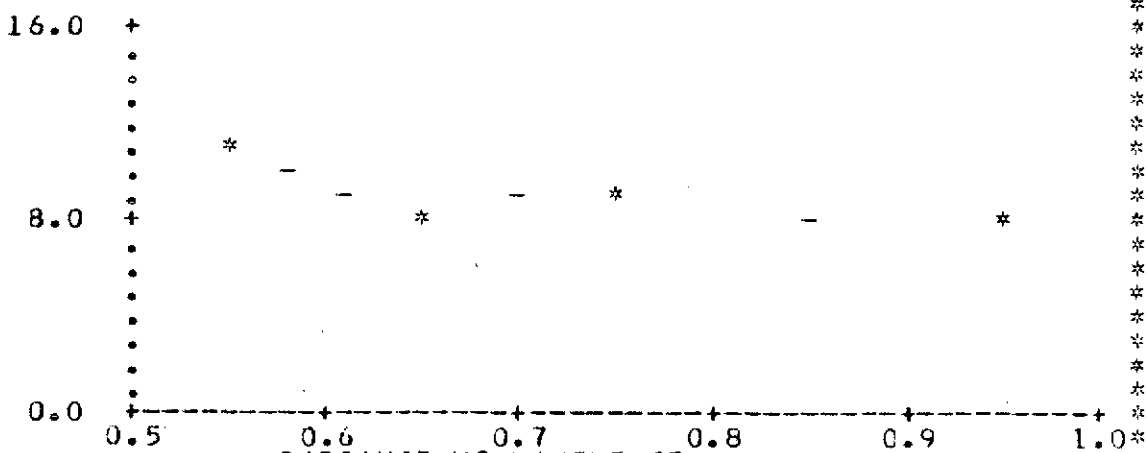
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.52 | 1.92 | .5 - .6 |
| BAND 5 | 8.39 | 2.26 | .6 - .7 |
| BAND 6 | 9.48 | 0.53 | .7 - .8 |
| BAND 7 | 8.03 | 0.74 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.989 | 0.391 | -0.672 |
| BAND 5 | 0.989 | 1.000 | 0.392 | -0.664 |
| BAND 6 | 0.391 | 0.392 | 1.000 | 0.329 |
| BAND 7 | -0.672 | -0.664 | 0.329 | 1.000 |

BAND RATIO PARAMETER -0.022
TRANSFORMED PARAMETER 0.691



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1340-17463
DATE ACQUIRED: 28JUN73

CELLS 2115 TO 2118
LINES 1513 TO 1516
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

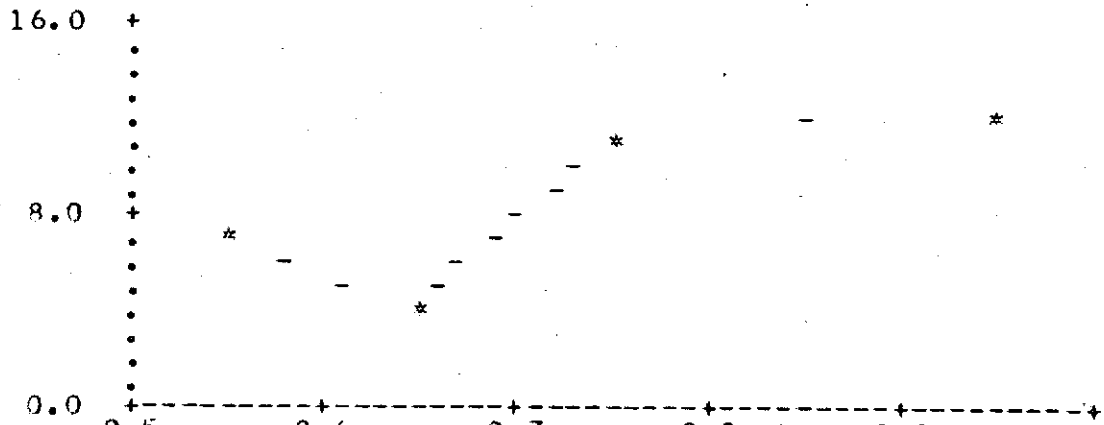
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.62 | 0.62 | .5 - .6 |
| BAND 5 | 3.95 | 0.82 | .6 - .7 |
| BAND 6 | 10.85 | 1.87 | .7 - .8 |
| BAND 7 | 11.51 | 2.36 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.914 | -0.579 | -0.599 |
| BAND 5 | 0.814 | 1.000 | -0.854 | -0.872 |
| BAND 6 | -0.579 | -0.854 | 1.000 | 0.989 |
| BAND 7 | -0.599 | -0.872 | 0.989 | 1.000 |

BAND RATIO PARAMETER 0.489
TRANSFORMED PARAMETER 0.994



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28MAY74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 P
IMAGE IDENTIFIER: 1340-17463
DATE ACQUIRED: 28JUN73

CELLS 2123 TO 2128
LINES 1512 TO 1517
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

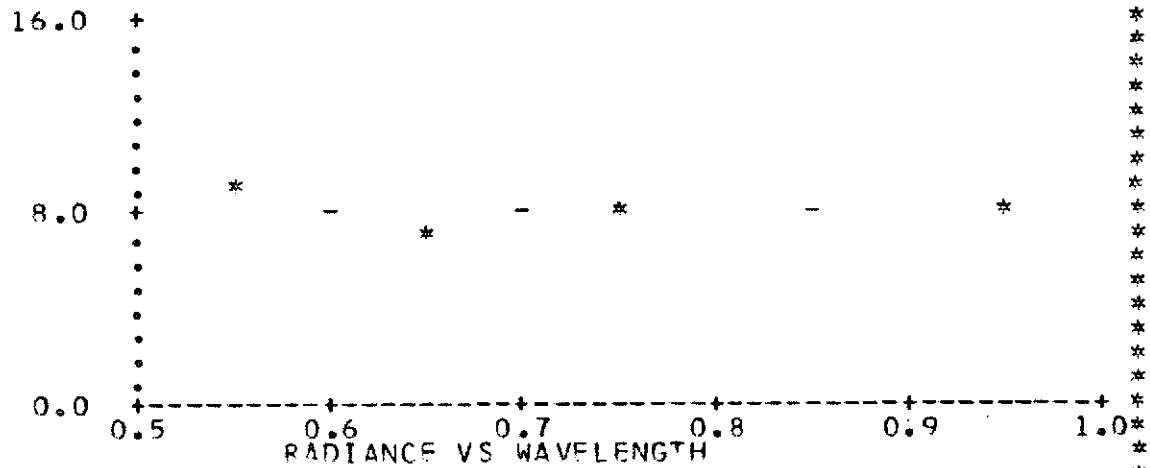
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.75 | 0.50 | .5 - .6 |
| BAND 5 | 6.89 | 0.47 | .6 - .7 |
| BAND 6 | 8.49 | 0.32 | .7 - .8 |
| BAND 7 | 7.67 | 0.31 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.761 | 0.103 | -0.354 |
| BAND 5 | 0.761 | 1.000 | -0.006 | -0.327 |
| BAND 6 | 0.103 | -0.006 | 1.000 | 0.568 |
| BAND 7 | -0.354 | -0.327 | 0.568 | 1.000 |

BAND RATIO PARAMETER 0.053
TRANSFORMED PARAMETER 0.744




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: BM 2 W
IMAGE IDENTIFIER: 1340-17463
DATE ACQUIRED: 28JUN73

CELLS 2121 TO 2126
LINES 1507 TO 1510
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

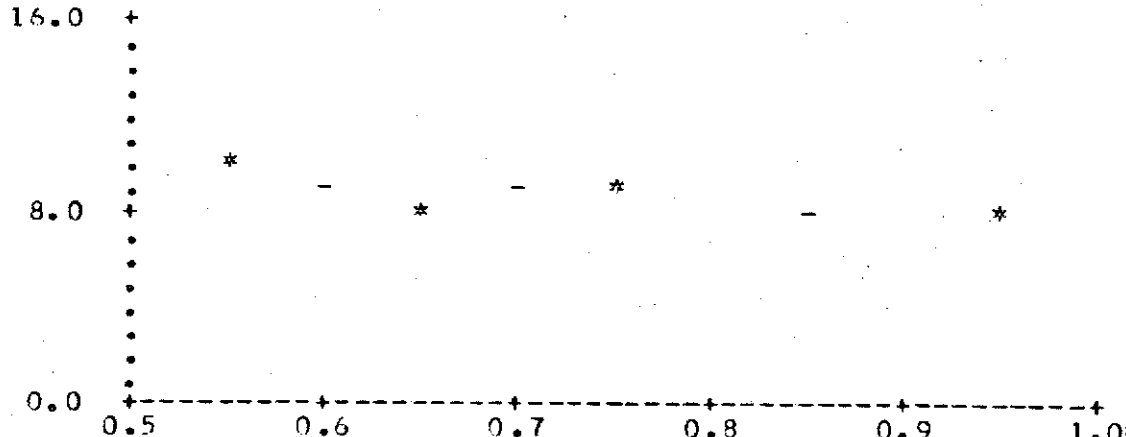
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.90 | 1.66 | .5 - .6 |
| BAND 5 | 7.92 | 2.00 | .6 - .7 |
| BAND 6 | 8.79 | 0.58 | .7 - .8 |
| BAND 7 | 7.51 | 0.65 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.976 | 0.435 | -0.652 |
| BAND 5 | 0.976 | 1.000 | 0.388 | -0.709 |
| BAND 6 | 0.435 | 0.388 | 1.000 | 0.301 |
| BAND 7 | -0.652 | -0.709 | 0.301 | 1.000 |

BAND RATIO PARAMETER -0.026
TRANSFORMED PARAMETER 0.688




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28MAY74

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1357-17404
DATE ACQUIRED: 15JUL73

CELLS 229 TO 232
LINES 1813 TO 1815
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

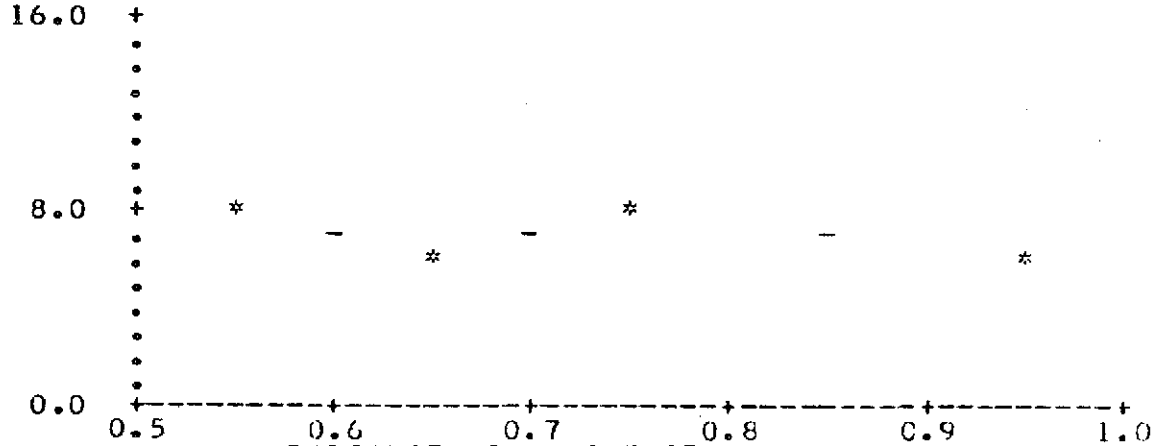
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.09 | 0.91 | .5 - .6 |
| BAND 5 | 6.03 | 1.25 | .6 - .7 |
| BAND 6 | 8.27 | 0.88 | .7 - .8 |
| BAND 7 | 6.50 | 1.85 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.950 | 0.720 | 0.156 |
| BAND 5 | 0.950 | 1.000 | 0.817 | 0.272 |
| BAND 6 | 0.720 | 0.817 | 1.000 | 0.517 |
| BAND 7 | 0.156 | 0.272 | 0.517 | 1.000 |

BAND RATIO PARAMETER 0.037
TRANSFORMED PARAMETER 0.733



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1357-17404
DATE ACQUIRED: 15JUL73

CELLS 237 TO 242
LINES 1812 TO 1817
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

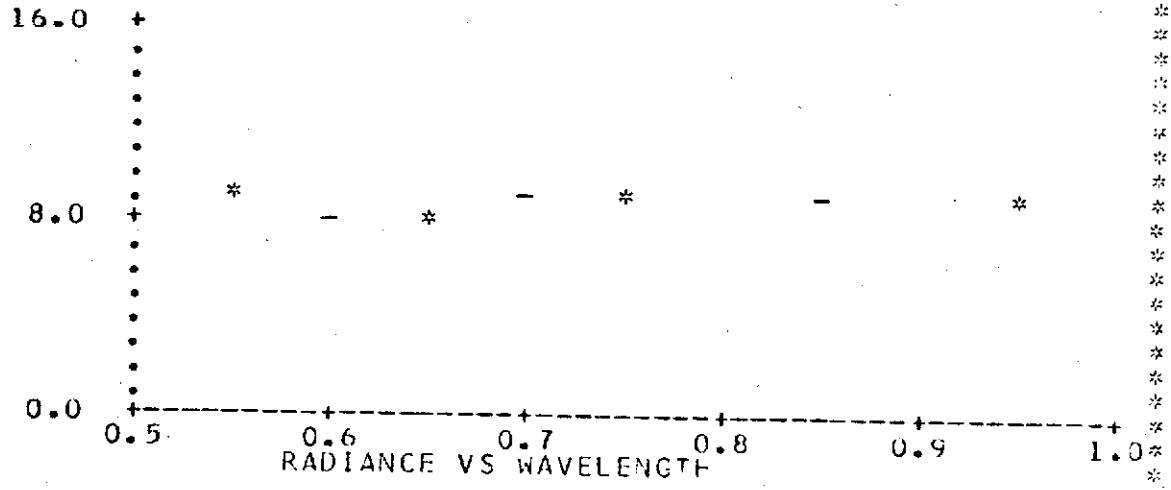
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.11 | 0.94 | .5 - .6 |
| BAND 5 | 7.52 | 1.49 | .6 - .7 |
| BAND 6 | 9.40 | 0.92 | .7 - .8 |
| BAND 7 | 8.57 | 2.20 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.944 | -0.704 | -0.453 |
| BAND 5 | 0.944 | 1.000 | -0.796 | -0.506 |
| BAND 6 | -0.704 | -0.796 | 1.000 | 0.506 |
| BAND 7 | -0.453 | -0.506 | 0.506 | 1.000 |

BAND RATIO PARAMETER 0.065
TRANSFORMED PARAMETER 0.752



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1357-17404
DATE ACQUIRED: 15JUL73

CELLS 235 TO 240
LINES 1807 TO 1810
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

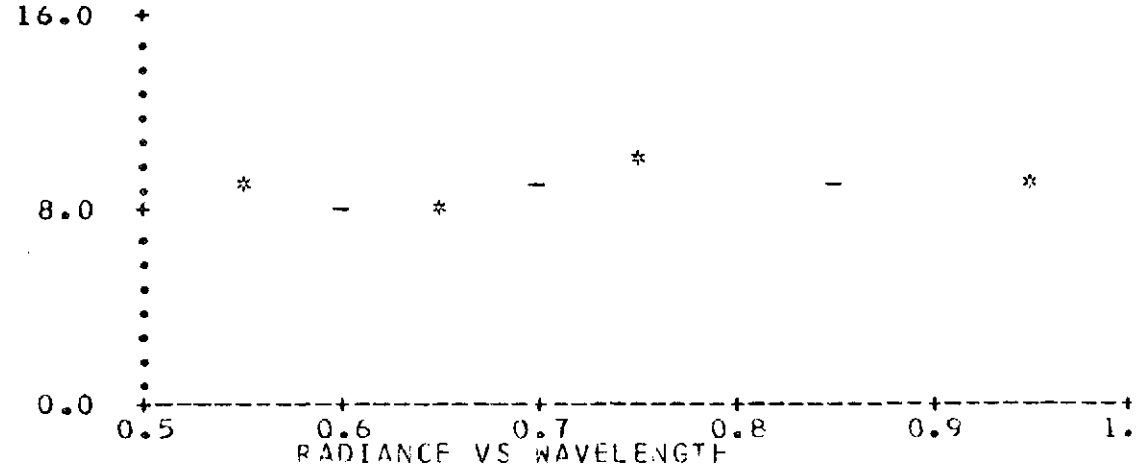
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.46 | 1.82 | .5 - .6 |
| BAND 5 | 7.68 | 2.21 | .6 - .7 |
| BAND 6 | 9.90 | 0.58 | .7 - .8 |
| BAND 7 | 8.84 | 1.04 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.974 | -0.264 | -0.895 |
| BAND 5 | 0.974 | 1.000 | -0.218 | -0.902 |
| BAND 6 | -0.264 | -0.218 | 1.000 | 0.501 |
| BAND 7 | -0.895 | -0.902 | 0.501 | 1.000 |

BAND RATIO PARAMETER 0.071
TRANSFORMED PARAMETER 0.755



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1358-17462
DATE ACQUIRED: 16JUL73

CELLS 2061 TO 2064
LINES 1460 TO 1464
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

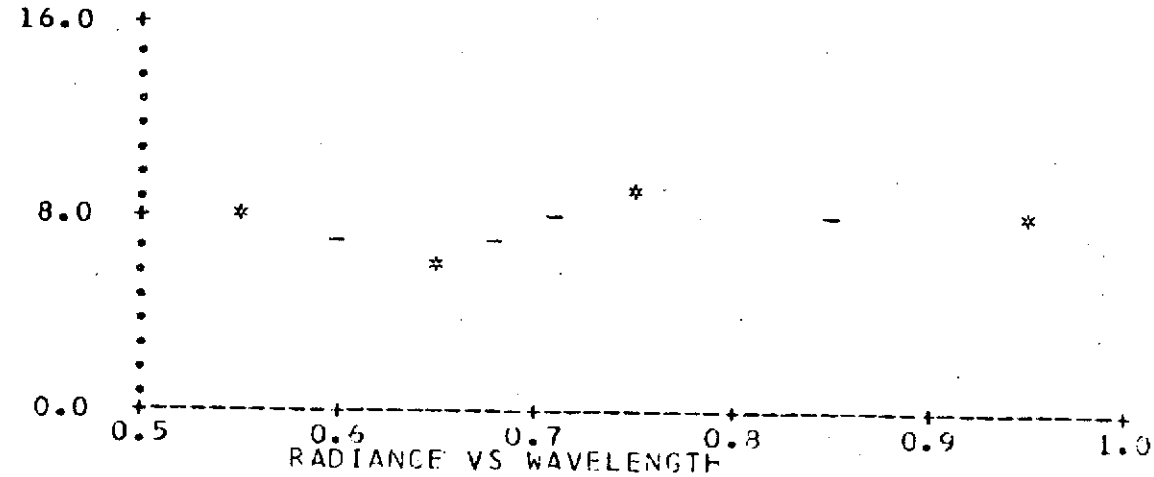
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.73 | 0.63 | .5 - .6 |
| BAND 5 | 5.57 | 0.82 | .6 - .7 |
| BAND 6 | 8.68 | 1.18 | .7 - .8 |
| BAND 7 | 8.38 | 1.47 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.860 | 0.577 | 0.426 |
| BAND 5 | 0.860 | 1.000 | 0.395 | 0.244 |
| BAND 6 | 0.577 | 0.395 | 1.000 | 0.955 |
| BAND 7 | 0.426 | 0.244 | 0.955 | 1.000 |

BAND RATIO PARAMETER 0.202
TRANSFORMED PARAMETER 0.838



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1358-17462
DATE ACQUIRED: 16JUL73

CELLS 2071 TO 2075
LINES 1459 TO 1464
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

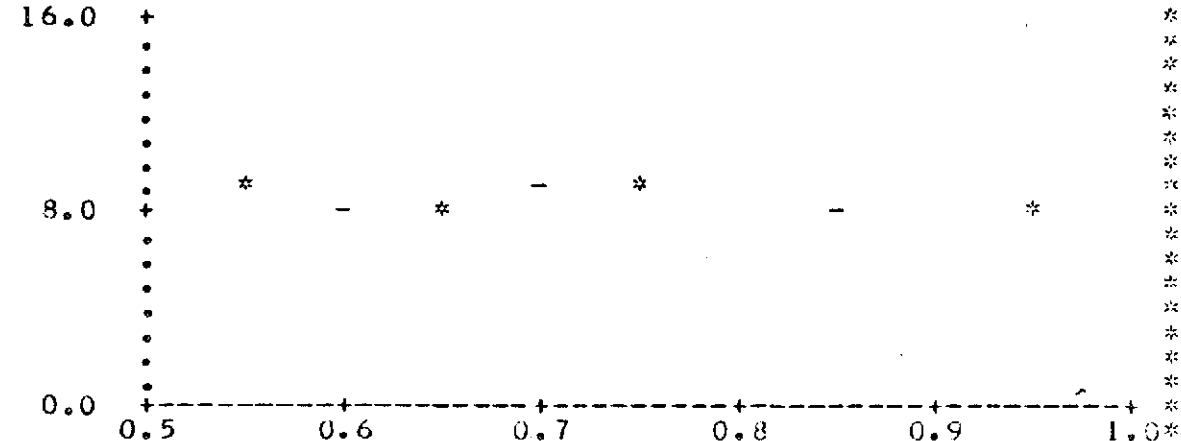
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.41 | 0.58 | .5 - .6 |
| BAND 5 | 8.05 | 0.50 | .6 - .7 |
| BAND 6 | 8.50 | 0.32 | .7 - .8 |
| BAND 7 | 7.63 | 0.30 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.725 | -0.027 | -0.696 |
| BAND 5 | 0.725 | 1.000 | 0.319 | -0.420 |
| BAND 6 | -0.027 | 0.319 | 1.000 | 0.309 |
| BAND 7 | -0.696 | -0.420 | 0.309 | 1.000 |

BAND RATIO PARAMETER -0.027
TRANSFORMED PARAMETER 0.688



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1358-17462
DATE ACQUIRED: 16JUL73

CELLS 2009 TO 2074
LINES 1455 TO 1457
TOTAL POINTS 18

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

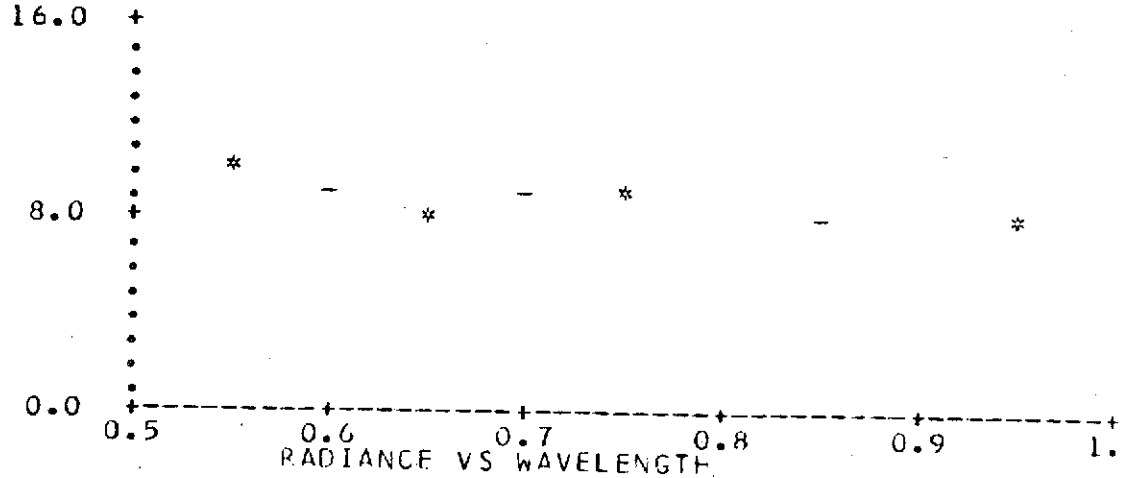
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.64 | 0.64 | .5 - .6 |
| BAND 5 | 8.38 | 0.66 | .6 - .7 |
| BAND 6 | 9.10 | 0.49 | .7 - .8 |
| BAND 7 | 7.95 | 0.39 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.788 | 0.619 | 0.617 |
| BAND 5 | 0.788 | 1.000 | 0.591 | 0.629 |
| BAND 6 | 0.619 | 0.591 | 1.000 | 0.920 |
| BAND 7 | 0.617 | 0.629 | 0.920 | 1.000 |

BAND RATIO PARAMETER -0.026
TRANSFORMED PARAMETER 0.638




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 06NOV73

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# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1430-17451
DATE ACQUIRED: 26SEP73

CELLS 1947 TO 1950
LINES 1532 TO 1536
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 38 DEGREES***

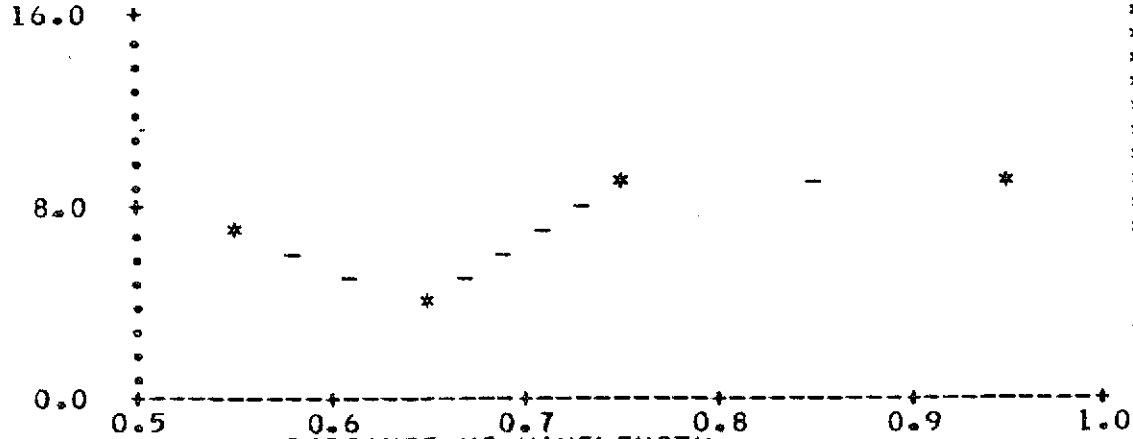
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.93 | 0.30 | .5 - .6 |
| BAND 5 | 3.91 | 0.46 | .6 - .7 |
| BAND 6 | 9.33 | 0.85 | .7 - .8 |
| BAND 7 | 9.41 | 0.92 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.620 | -0.294 | -0.497 |
| BAND 5 | 0.620 | 1.000 | -0.753 | -0.753 |
| BAND 6 | -0.294 | -0.753 | 1.000 | 0.878 |
| BAND 7 | -0.497 | -0.753 | 0.878 | 1.000 |

BAND RATIO PARAMETER 0.412
TRANSFORMED PARAMETER 0.955



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1430-17451
DATE ACQUIRED: 26SEP73

CELLS 1955 TO 1960
LINES 1531 TO 1536
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 38 DEGREES***

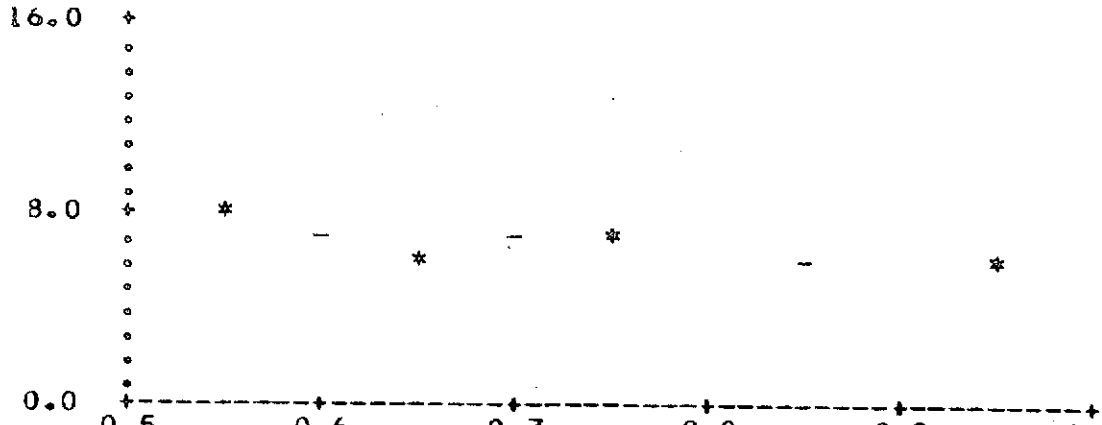
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.25 | 0.26 | .5 - .6 |
| BAND 5 | 5.80 | 0.47 | .6 - .7 |
| BAND 6 | 7.34 | 0.45 | .7 - .8 |
| BAND 7 | 6.45 | 0.40 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.588 | -0.154 | -0.169 |
| BAND 5 | 0.588 | 1.000 | -0.285 | -0.334 |
| BAND 6 | -0.154 | -0.285 | 1.000 | 0.626 |
| BAND 7 | -0.169 | -0.334 | 0.626 | 1.000 |

BAND RATIO PARAMETER 0.054
TRANSFORMED PARAMETER 0.744



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1430-17451
DATE ACQUIRED: 26SEP73

CELLS 1953 TO 1958
LINES 1527 TO 1529
TOTAL POINTS 18

***CORRECTED FOR SUN ELEVATION 38 DEGREES***

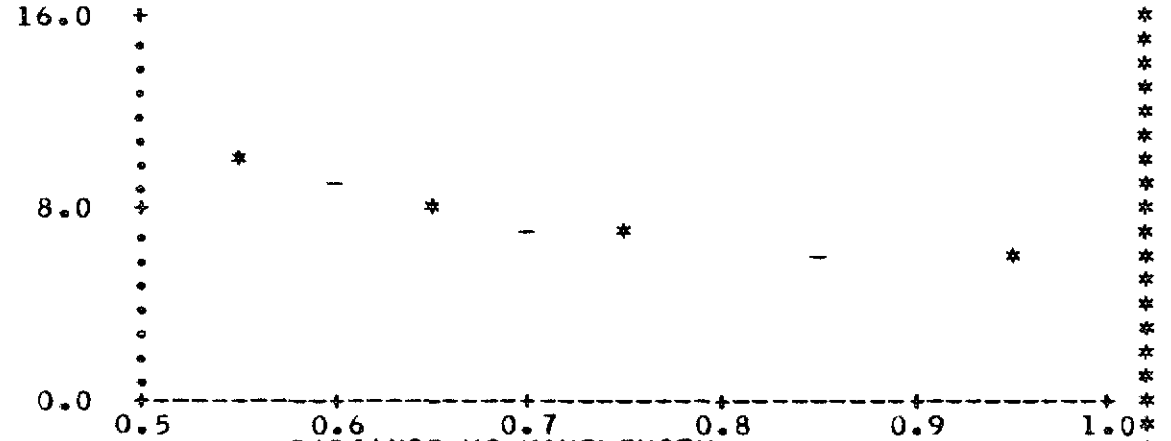
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.04 | 0.51 | .5 - .6 |
| BAND 5 | 8.30 | 0.62 | .6 - .7 |
| BAND 6 | 7.39 | 0.38 | .7 - .8 |
| BAND 7 | 5.70 | 0.34 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.852 | 0.260 | 0.242 |
| BAND 5 | 0.852 | 1.000 | 0.406 | 0.239 |
| BAND 6 | 0.260 | 0.406 | 1.000 | 0.217 |
| BAND 7 | 0.242 | 0.239 | 0.217 | 1.000 |

BAND RATIO PARAMETER -0.186
TRANSFORMED PARAMETER 0.561




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 A
IMAGE IDENTIFIER: 1448-17444
DATE ACQUIRED: 14OCT73

CELLS 1849 TO 1854
LINES 1590 TO 1594
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 32 DEGREES***

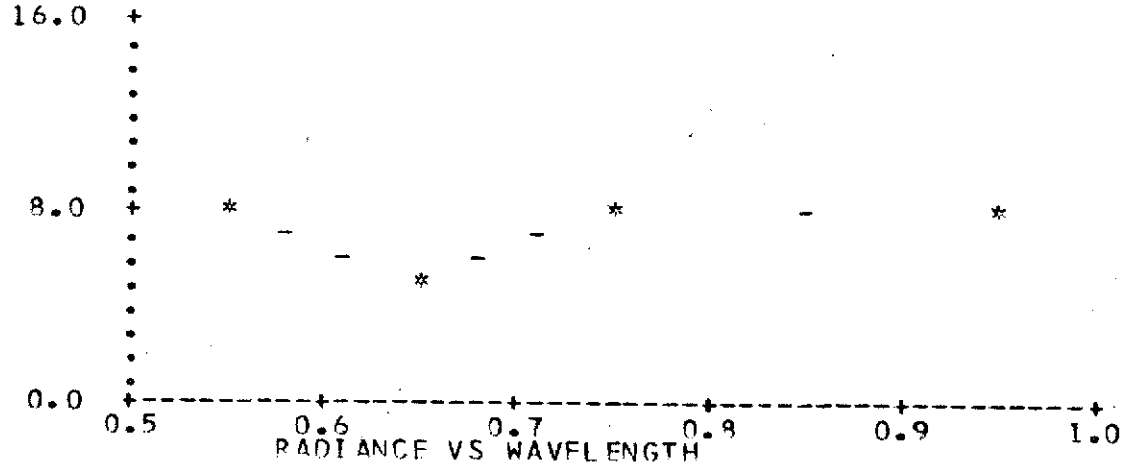
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.65 | 0.67 | .5 - .6 |
| BAND 5 | 5.01 | 0.67 | .6 - .7 |
| BAND 6 | 8.41 | 2.05 | .7 - .8 |
| BAND 7 | 7.88 | 2.26 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.511 | 0.446 | 0.464 |
| BAND 5 | 0.511 | 1.000 | -0.233 | -0.303 |
| BAND 6 | 0.446 | -0.233 | 1.000 | 0.974 |
| BAND 7 | 0.464 | -0.303 | 0.974 | 1.000 |

BAND RATIO PARAMETER 0.223
TRANSFORMED PARAMETER 0.850



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 R
IMAGE IDENTIFIER: 1448-17444
DATE ACQUIRED: 14OCT73

CELLS 1857 TO 1862
LINES 1590 TO 1594
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 32 DEGREES***

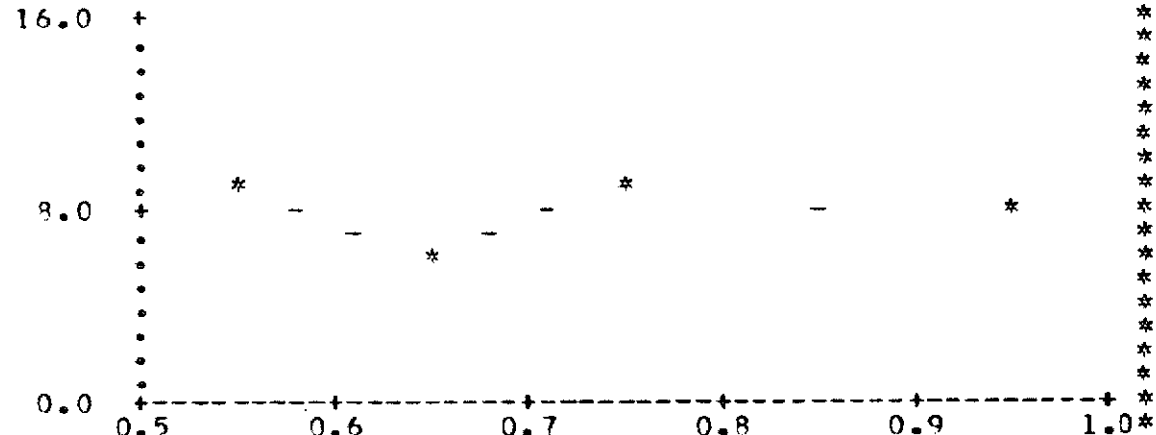
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.64 | 0.52 | .5 - .6 |
| BAND 5 | 5.93 | 0.70 | .6 - .7 |
| BAND 6 | 8.81 | 1.01 | .7 - .8 |
| BAND 7 | 7.72 | 1.17 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.675 | -0.468 | -0.566 |
| BAND 5 | 0.675 | 1.000 | -0.814 | -0.845 |
| BAND 6 | -0.468 | -0.814 | 1.000 | 0.899 |
| BAND 7 | -0.566 | -0.845 | 0.899 | 1.000 |

BAND RATIO PARAMETER 0.130
TRANSFORMED PARAMETER 0.794




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 2 W
IMAGE IDENTIFIER: 1448-17444
DATE ACQUIRED: 14OCT73

CELLS 1857 TO 1862
LINES 1585 TO 1587
TOTAL POINTS 18

***CORRECTED FOR SUN ELEVATION 32 DEGREES***

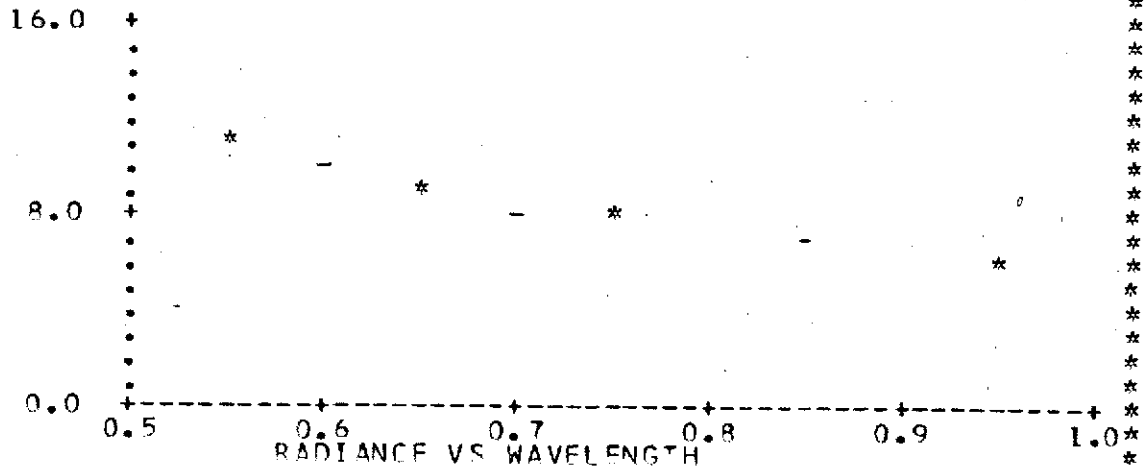
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.97 | 0.66 | .5 - .6 |
| BAND 5 | 9.16 | 0.66 | .6 - .7 |
| BAND 6 | 7.85 | 0.52 | .7 - .8 |
| BAND 7 | 5.73 | 0.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.679 | 0.653 | 0.554 |
| BAND 5 | 0.679 | 1.000 | 0.712 | 0.392 |
| BAND 6 | 0.653 | 0.712 | 1.000 | 0.707 |
| BAND 7 | 0.554 | 0.392 | 0.707 | 1.000 |

BAND RATIO PARAMETER -0.231
TRANSFORMED PARAMETER 0.519



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1034-17464
DATE ACQUIRED: 26AUG72

CELLS 1679 TO 1684
LINES 1914 TO 1917
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

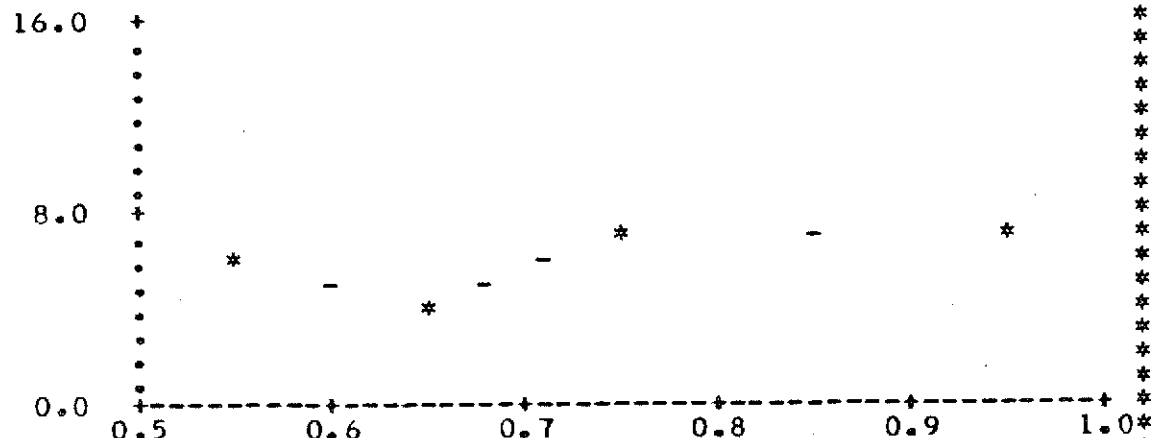
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.46 | 0.65 | .5 - .6 |
| BAND 5 | 4.30 | 0.84 | .6 - .7 |
| BAND 6 | 7.25 | 1.18 | .7 - .8 |
| BAND 7 | 7.11 | 1.38 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.933 | -0.556 | -0.457 |
| BAND 5 | 0.933 | 1.000 | -0.646 | -0.566 |
| BAND 6 | -0.556 | -0.646 | 1.000 | 0.969 |
| BAND 7 | -0.457 | -0.566 | 0.969 | 1.000 |

BAND RATIO PARAMETER 0.246
TRANSFORMED PARAMETER 0.863



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 R
IMAGE IDENTIFIER: 1034-17464
DATE ACQUIRED: 26AUG72

CELLS 1657 TO 1668
LINES 1926 TO 1940
TOTAL POINTS 180

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

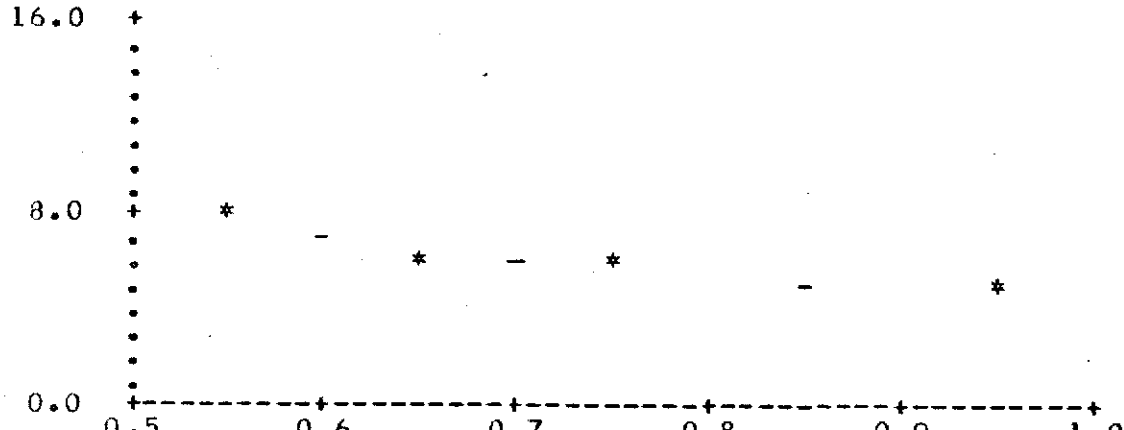
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.07 | 0.72 | .5 - .6 |
| BAND 5 | 6.24 | 0.83 | .6 - .7 |
| BAND 6 | 5.82 | 0.42 | .7 - .8 |
| BAND 7 | 4.90 | 0.50 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.910 | 0.262 | -0.343 |
| BAND 5 | 0.910 | 1.000 | 0.308 | -0.340 |
| BAND 6 | 0.262 | 0.308 | 1.000 | 0.573 |
| BAND 7 | -0.343 | -0.340 | 0.573 | 1.000 |

BAND RATIO PARAMETER -0.120
TRANSFORMED PARAMETER 0.617




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIER: 1034-17464
DATE ACQUIRED: 26AUG72

CELLS 1683 TO 1689
LINES 1915 TO 1918
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

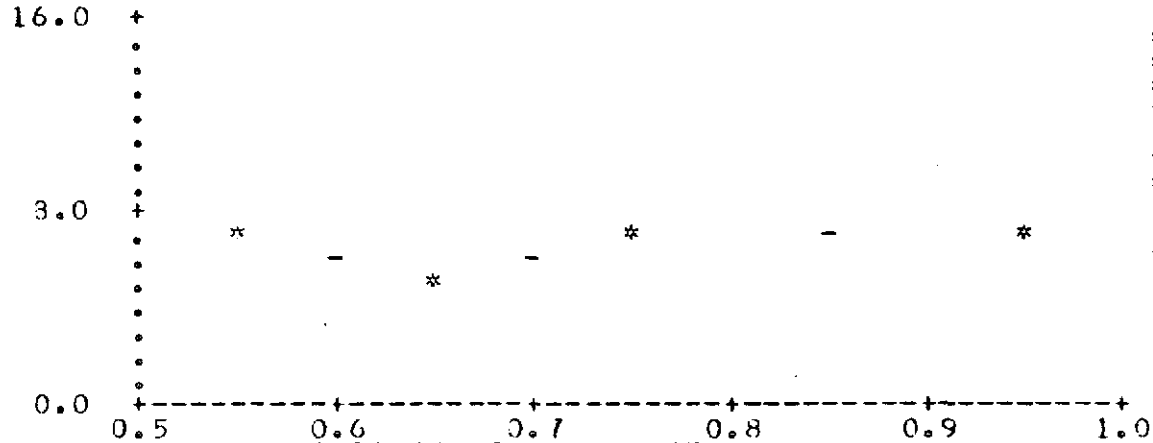
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.95 | 0.53 | .5 - .6 |
| BAND 5 | 4.94 | 0.72 | .6 - .7 |
| BAND 6 | 7.49 | 0.86 | .7 - .8 |
| BAND 7 | 7.37 | 1.08 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.873 | -0.362 | -0.444 |
| BAND 5 | 0.873 | 1.000 | -0.530 | -0.582 |
| BAND 6 | -0.362 | -0.530 | 1.000 | 0.954 |
| BAND 7 | -0.444 | -0.582 | 0.954 | 1.000 |

BAND RATIO PARAMETER 0.207
TRANSFORMED PARAMETER 0.841



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 15JAN74

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1052-17463
DATE ACQUIRED: 13SEP72

CELLS 1501 TO 1506
LINES 1869 TO 1873
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 43 DEGREES***

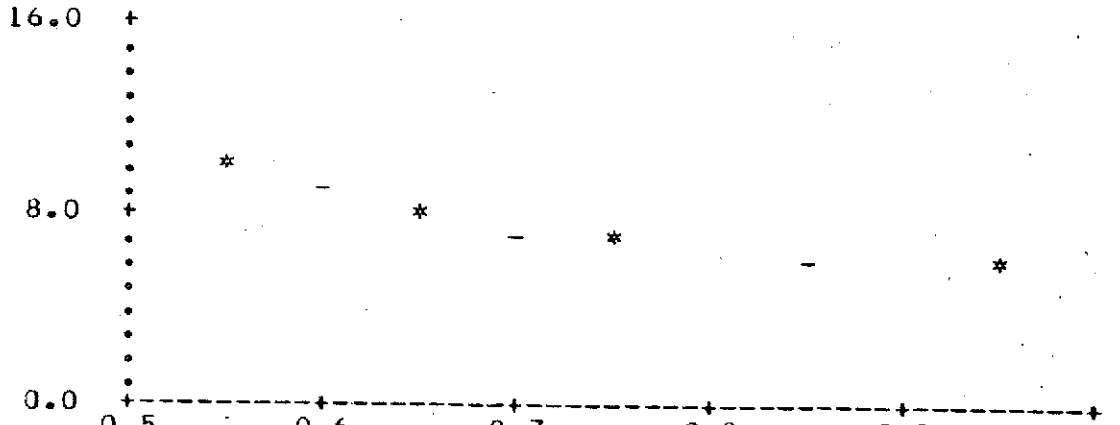
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.18 | 0.30 | .5 - .6 |
| BAND 5 | 8.25 | 0.32 | .6 - .7 |
| BAND 6 | 7.00 | 0.24 | .7 - .8 |
| BAND 7 | 5.79 | 0.19 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.204 | -0.026 | 0.412 |
| BAND 5 | 0.204 | 1.000 | 0.244 | 0.436 |
| BAND 6 | -0.026 | 0.244 | 1.000 | 0.236 |
| BAND 7 | 0.412 | 0.436 | 0.236 | 1.000 |

BAND RATIO PARAMETER -0.175
TRANSFORMED PARAMETER 0.570




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 R
IMAGE IDENTIFIER: 1052-17463
DATE ACQUIRED: 13SEP72

CELLS 1479 TO 1488
LINES 1885 TO 1904
TOTAL POINTS 200

***CORRECTED FOR SUN ELEVATION 43 DEGREES***

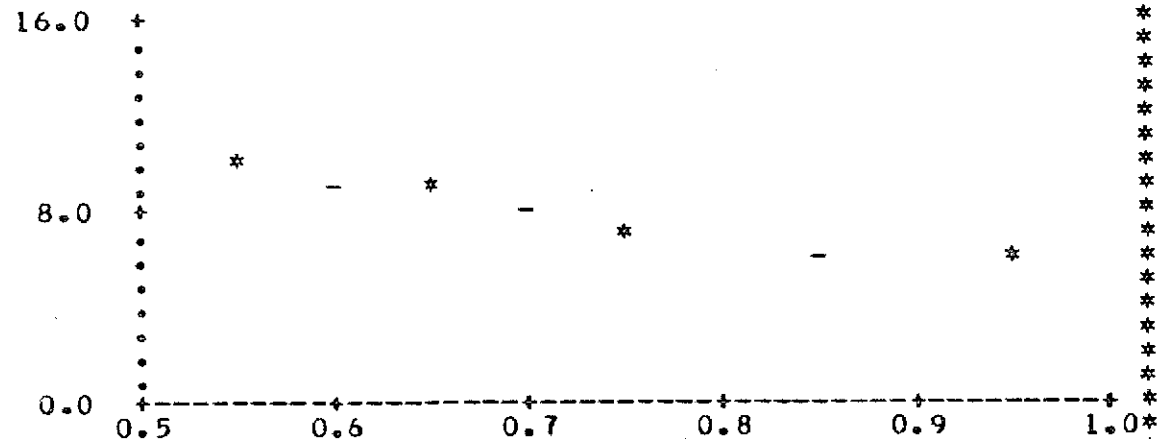
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.30 | 0.51 | .5 - .6 |
| BAND 5 | 8.50 | 0.50 | .6 - .7 |
| BAND 6 | 7.48 | 0.42 | .7 - .8 |
| BAND 7 | 6.27 | 0.28 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.660 | 0.340 | 0.351 |
| BAND 5 | 0.660 | 1.000 | 0.558 | 0.561 |
| BAND 6 | 0.340 | 0.558 | 1.000 | 0.563 |
| BAND 7 | 0.351 | 0.561 | 0.563 | 1.000 |

BAND RATIO PARAMETER -0.151
TRANSFORMED PARAMETER 0.590




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIER: 1052-17463
DATE ACQUIRED: 13SEP72

CELLS 1507 TO 1512
LINES 1871 TO 1875
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 43 DEGREES***

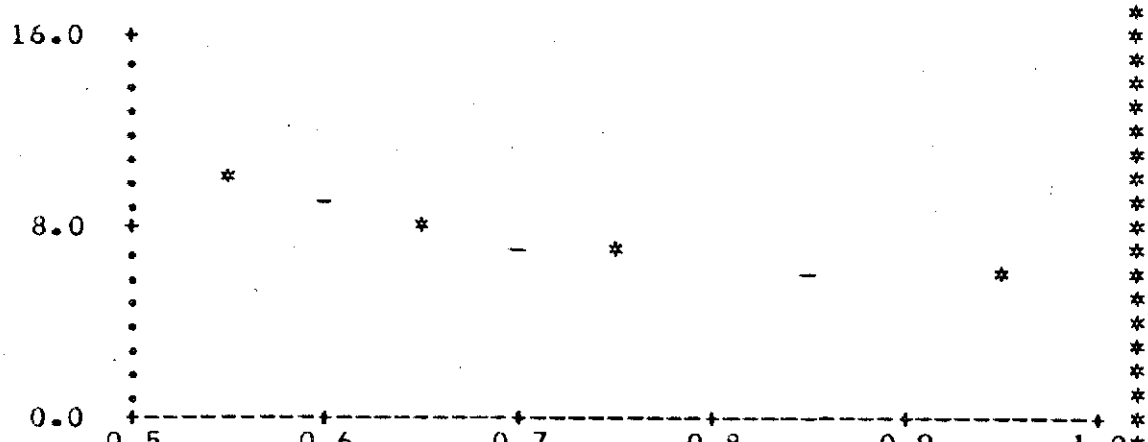
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.78 | 0.37 | .5 - .6 |
| BAND 5 | 7.94 | 0.28 | .6 - .7 |
| BAND 6 | 6.85 | 0.34 | .7 - .8 |
| BAND 7 | 5.65 | 0.20 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.416 | 0.103 | 0.312 |
| BAND 5 | 0.416 | 1.000 | 0.547 | 0.524 |
| BAND 6 | 0.103 | 0.547 | 1.000 | 0.387 |
| BAND 7 | 0.312 | 0.524 | 0.387 | 1.000 |

BAND RATIO PARAMETER -0.169
TRANSFORMED PARAMETER 0.576




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1070-17463
DATE ACQUIRED: 01OCT72

CELLS 1579 TO 1582
LINES 2149 TO 2152
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 37 DEGREES***

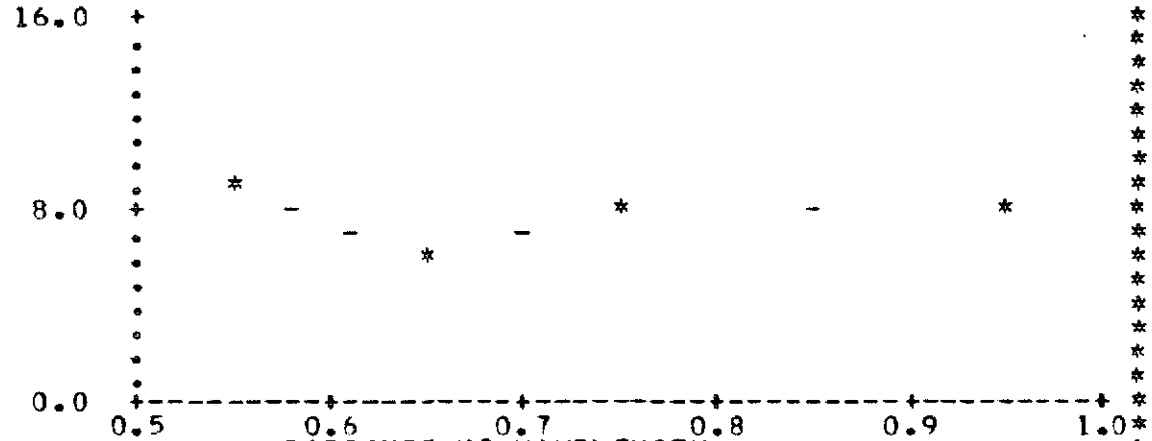
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.60 | 0.43 | .5 - .6 |
| BAND 5 | 6.30 | 0.68 | .6 - .7 |
| BAND 6 | 8.29 | 0.96 | .7 - .8 |
| BAND 7 | 8.05 | 1.07 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.771 | 0.195 | 0.105 |
| BAND 5 | 0.771 | 1.000 | 0.006 | -0.067 |
| BAND 6 | 0.195 | 0.006 | 1.000 | 0.972 |
| BAND 7 | 0.105 | -0.067 | 0.972 | 1.000 |

BAND RATIO PARAMETER 0.122
TRANSFORMED PARAMETER 0.789




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 R
IMAGE IDENTIFIER: 1070-17463
DATE ACQUIRED: 01OCT72

CELLS 1553 TO 1565
LINES 2163 TO 2183
TOTAL POINTS 294

***CORRECTED FOR SUN ELEVATION 37 DEGREES***

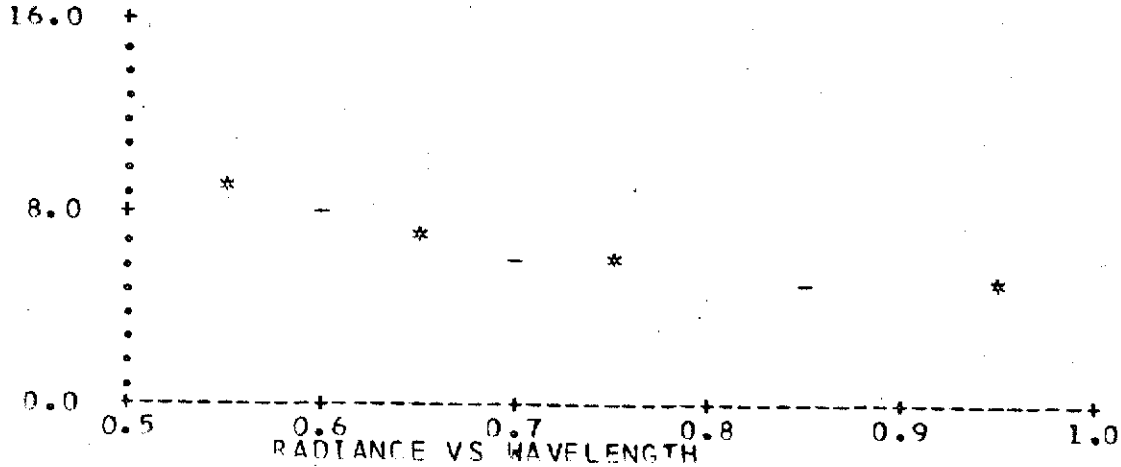
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.29 | 0.78 | .5 - .6 |
| BAND 5 | 7.07 | 0.71 | .6 - .7 |
| BAND 6 | 5.99 | 0.50 | .7 - .8 |
| BAND 7 | 4.94 | 0.46 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.860 | 0.572 | 0.215 |
| BAND 5 | 0.860 | 1.000 | 0.672 | 0.318 |
| BAND 6 | 0.572 | 0.672 | 1.000 | 0.637 |
| BAND 7 | 0.215 | 0.318 | 0.637 | 1.000 |

BAND RATIO PARAMETER -0.178
TRANSFORMED PARAMETER 0.568



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 10JAN74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIER: 1070-17463
DATE ACQUIRED: 010CT72

CELLS 1583 TO 1588
LINES 2150 TO 2153
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 37 DEGREES***

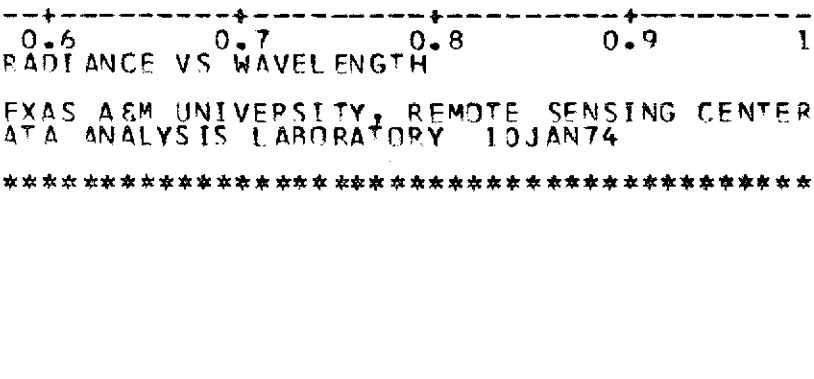
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.41 | 0.32 | .5 - .6 |
| BAND 5 | 6.00 | 0.60 | .6 - .7 |
| BAND 6 | 8.18 | 1.24 | .7 - .8 |
| BAND 7 | 8.10 | 1.50 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.642 | 0.075 | 0.062 |
| BAND 5 | 0.642 | 1.000 | -0.457 | -0.506 |
| BAND 6 | 0.075 | -0.457 | 1.000 | 0.976 |
| BAND 7 | 0.062 | -0.506 | 0.976 | 1.000 |

BAND RATIO PARAMETER 0.149
TRANSFORMED PARAMETER 0.806




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1340-17470
DATE ACQUIRED: 28JUN73

CELLS 1877 TO 1880
LINES 2014 TO 2018
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

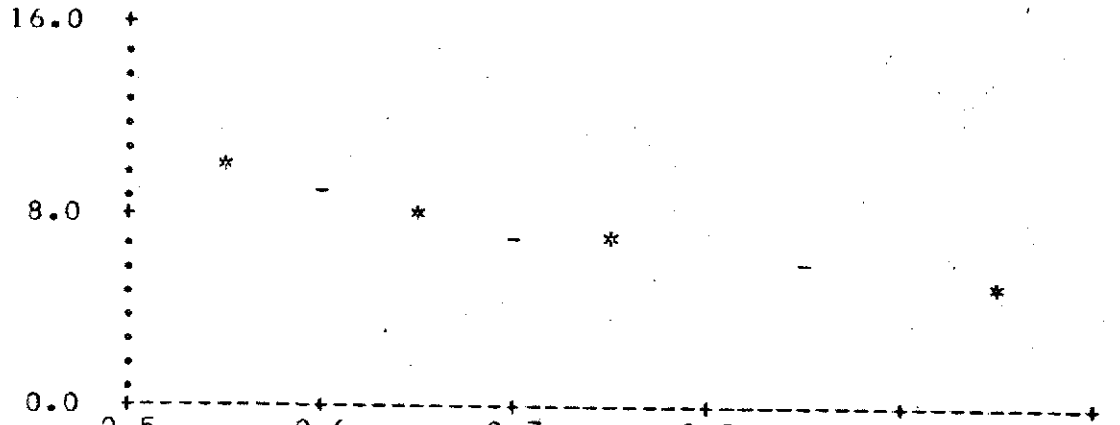
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.57 | 0.42 | .5 - .6 |
| BAND 5 | 7.55 | 0.44 | .6 - .7 |
| BAND 6 | 6.70 | 0.44 | .7 - .8 |
| BAND 7 | 5.17 | 0.30 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.889 | 0.736 | 0.686 |
| BAND 5 | 0.889 | 1.000 | 0.804 | 0.733 |
| BAND 6 | 0.736 | 0.804 | 1.000 | 0.736 |
| BAND 7 | 0.686 | 0.733 | 0.736 | 1.000 |

BAND RATIO PARAMETER -0.187
TRANSFORMED PARAMETER 0.559




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 12FEB74

# ERTS-1 SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 R
IMAGE IDENTIFIER: 1340-17470
DATE ACQUIRED: 28JUN73

CELLS 1855 TO 1866
LINES 2030 TO 2049
TOTAL POINTS 240

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

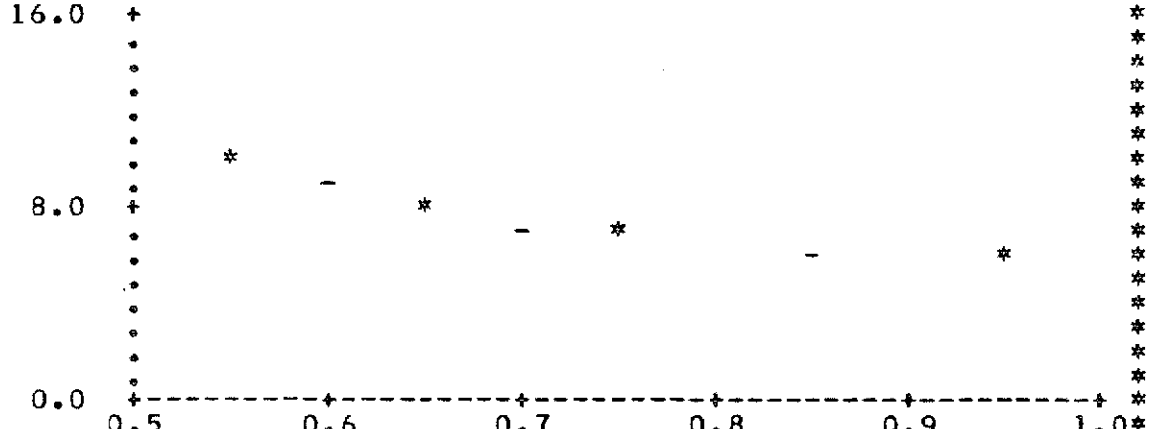
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.11 | 0.84 | .5 - .6 |
| BAND 5 | 8.13 | 0.88 | .6 - .7 |
| BAND 6 | 7.18 | 0.77 | .7 - .8 |
| BAND 7 | 5.58 | 0.62 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.911 | 0.895 | 0.868 |
| BAND 5 | 0.911 | 1.000 | 0.942 | 0.922 |
| BAND 6 | 0.895 | 0.942 | 1.000 | 0.922 |
| BAND 7 | 0.868 | 0.922 | 0.922 | 1.000 |

BAND RATIO PARAMETER -0.185
TRANSFORMED PARAMETER 0.561




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 12FEB74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIER: 1340-17470
DATE ACQUIRED: 28JUN73

CELLS 1881 TO 1886
LINES 2016 TO 2019
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

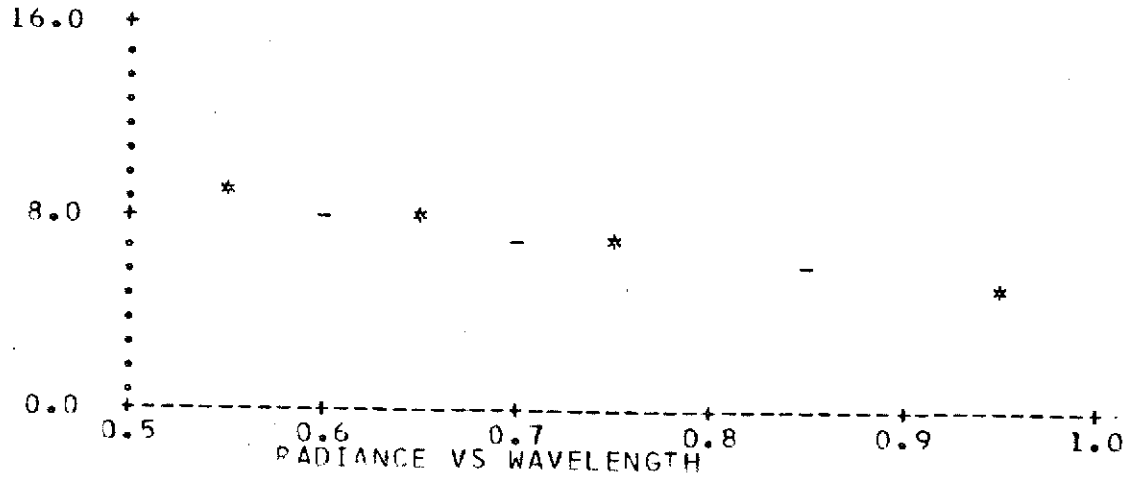
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.45 | 0.53 | .5 - .6 |
| BAND 5 | 7.50 | 0.62 | .6 - .7 |
| BAND 6 | 6.65 | 0.49 | .7 - .8 |
| BAND 7 | 5.22 | 0.43 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.886 | 0.879 | 0.854 |
| BAND 5 | 0.886 | 1.000 | 0.839 | 0.850 |
| BAND 6 | 0.879 | 0.839 | 1.000 | 0.950 |
| BAND 7 | 0.854 | 0.850 | 0.950 | 1.000 |

BAND RATIO PARAMETER -0.180
TRANSFORMED PARAMETER 0.566




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 12FEB74

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# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1358-17465
DATE ACQUIRED: 16JUL73

CELLS 2039 TO 2041
LINES 1939 TO 1943
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

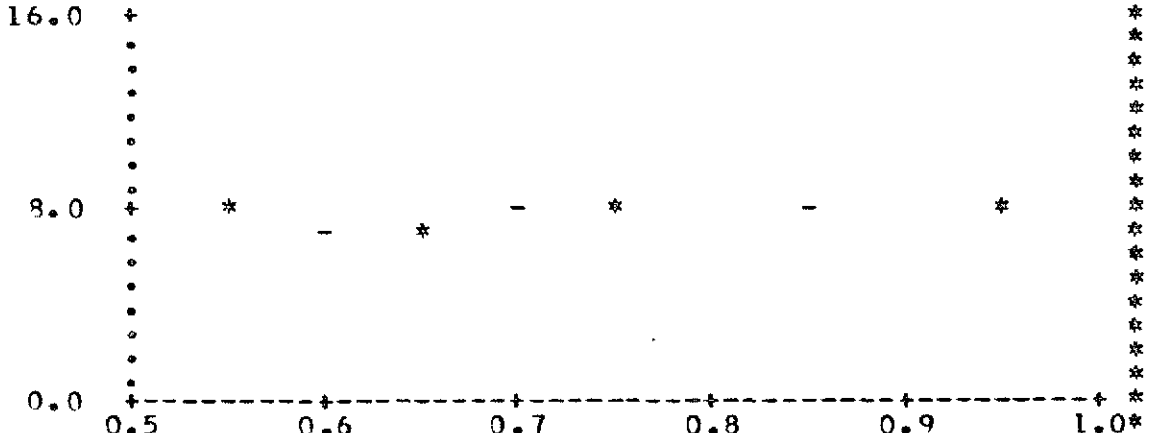
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.50 | 0.64 | .5 - .6 |
| BAND 5 | 6.84 | 1.04 | .6 - .7 |
| BAND 6 | 7.98 | 1.07 | .7 - .8 |
| BAND 7 | 7.53 | 1.69 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.954 | -0.693 | -0.746 |
| BAND 5 | 0.954 | 1.000 | -0.755 | -0.824 |
| BAND 6 | -0.693 | -0.755 | 1.000 | 0.966 |
| BAND 7 | -0.746 | -0.824 | 0.966 | 1.000 |

BAND RATIO PARAMETER 0.048
TRANSFORMED PARAMETER 0.740




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 P
IMAGE IDENTIFIER: 1358-17465
DATE ACQUIRED: 16JUL73

CELLS 1917 TO 1930
LINES 2053 TO 2073
TOTAL POINTS 294

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

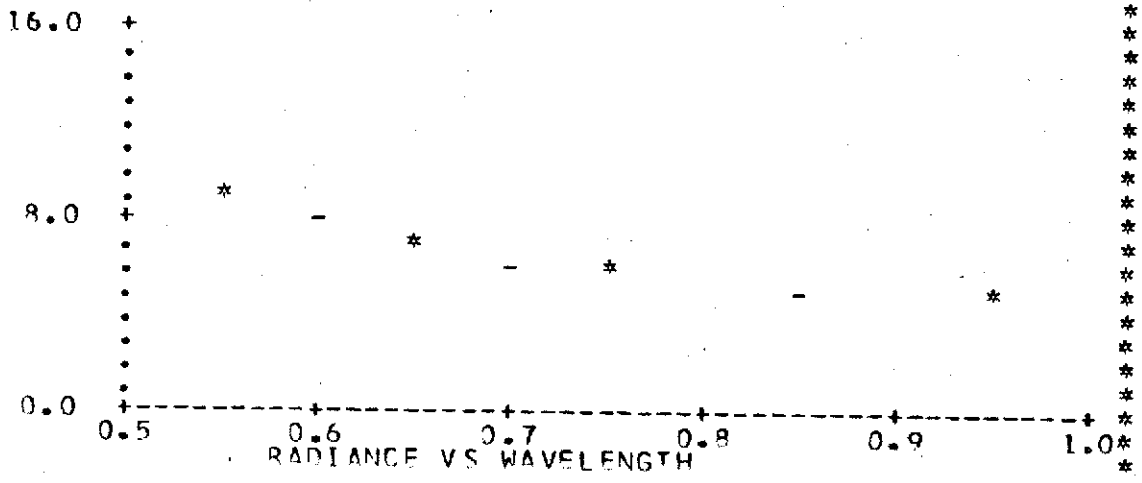
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.72 | 0.69 | .5 - .6 |
| BAND 5 | 7.02 | 0.86 | .6 - .7 |
| BAND 6 | 6.49 | 0.42 | .7 - .8 |
| BAND 7 | 5.30 | 0.43 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.895 | 0.345 | -0.317 |
| BAND 5 | 0.895 | 1.000 | 0.358 | -0.334 |
| BAND 6 | 0.345 | 0.358 | 1.000 | 0.571 |
| BAND 7 | -0.317 | -0.334 | 0.571 | 1.000 |

BAND RATIO PARAMETER -0.140
TRANSFORMED PARAMETER 0.600



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIER: 1358-17465
DATE ACQUIRED: 16JUL73

CELLS 2041 TO 2043
LINES 1945 TO 1948
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

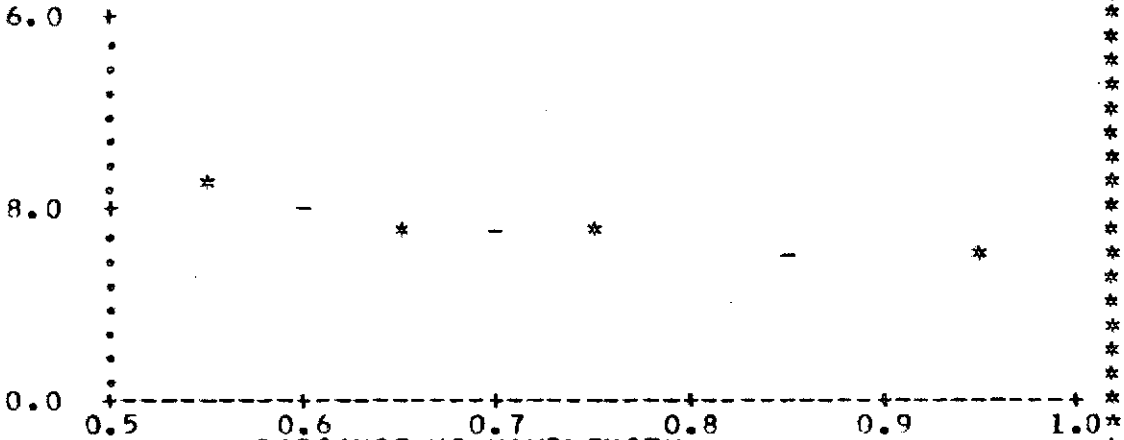
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.20 | 0.37 | .5 - .6 |
| BAND 5 | 7.49 | 0.45 | .6 - .7 |
| BAND 6 | 7.33 | 0.43 | .7 - .8 |
| BAND 7 | 5.90 | 0.55 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.491 | 0.434 | 0.221 |
| BAND 5 | 0.491 | 1.000 | -0.174 | -0.166 |
| BAND 6 | 0.434 | -0.174 | 1.000 | 0.903 |
| BAND 7 | 0.221 | -0.166 | 0.903 | 1.000 |

BAND RATIO PARAMETER -0.119
TRANSFORMED PARAMETER 0.618




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1430-17453
DATE ACQUIRED: 26SEP73

CELLS 1837 TO 1842
LINES 2067 TO 2070
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 39 DEGREES***

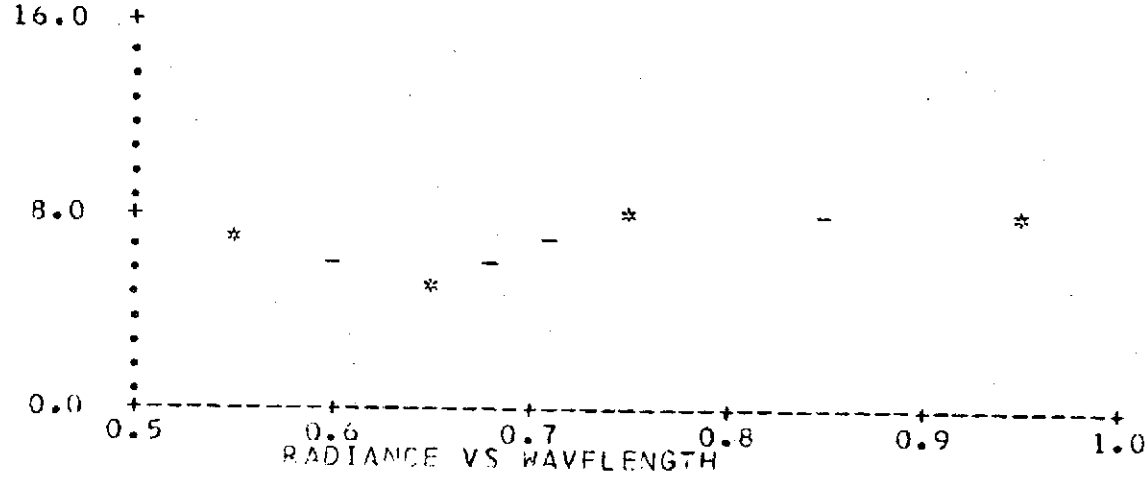
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.37 | 0.52 | .5 - .6 |
| BAND 5 | 5.36 | 0.73 | .6 - .7 |
| BAND 6 | 7.59 | 3.98 | .7 - .8 |
| BAND 7 | 7.51 | 1.17 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.845 | -0.002 | -0.501 |
| BAND 5 | 0.845 | 1.000 | -0.135 | -0.588 |
| BAND 6 | -0.002 | -0.135 | 1.000 | 0.268 |
| BAND 7 | -0.501 | -0.583 | 0.268 | 1.000 |

BAND RATIO PARAMETER 0.167
TRANSFORMED PARAMETER 0.817



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: PM 3 R
IMAGE IDENTIFIER: 1430-17453
DATE ACQUIRED: 26SEP73

CELLS 1813 TO 1826
LINES 2081 TO 2100
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 39 DEGREES***

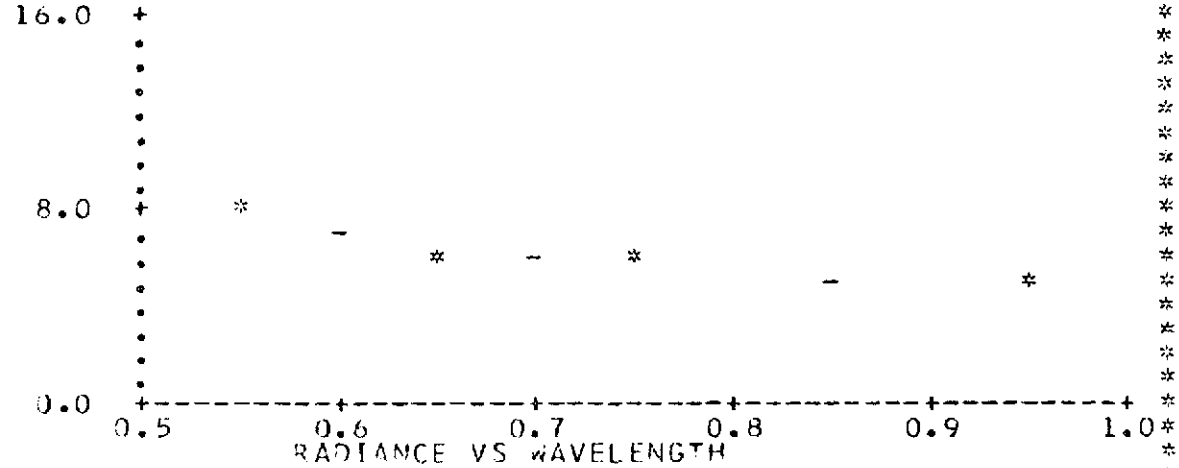
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.20 | 0.73 | .5 - .6 |
| BAND 5 | 6.31 | 0.73 | .6 - .7 |
| BAND 6 | 6.27 | 3.12 | .7 - .8 |
| BAND 7 | 4.72 | 0.47 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.881 | 0.076 | -0.040 |
| BAND 5 | 0.881 | 1.000 | 0.059 | -0.014 |
| BAND 6 | 0.076 | 0.059 | 1.000 | 0.066 |
| BAND 7 | -0.040 | -0.014 | 0.066 | 1.000 |

BAND RATIO PARAMETER -0.144
TRANSFORMED PARAMETER 0.597



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 15JAN74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIED: 1430-17453
DATE ACQUIRED: 26SEP73

CELLS 1841 TO 1848
LINES 2068 TO 2071
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 39 DEGREES***

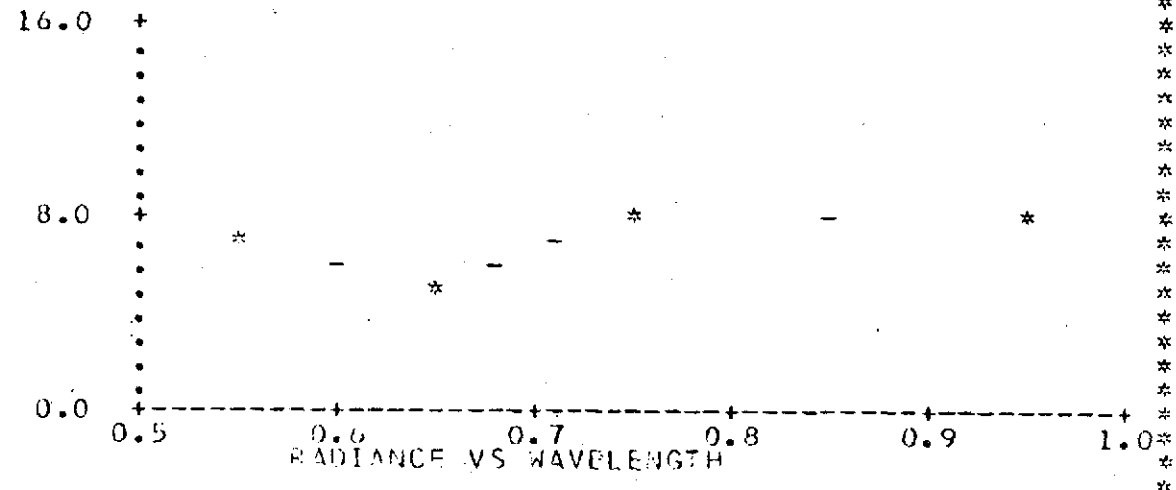
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.13 | 0.59 | .5 - .6 |
| BAND 5 | 4.93 | 0.64 | .6 - .7 |
| BAND 6 | 7.71 | 4.09 | .7 - .8 |
| BAND 7 | 7.85 | 1.46 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.801 | -0.107 | -0.435 |
| BAND 5 | 0.801 | 1.000 | -0.128 | -0.527 |
| BAND 6 | -0.107 | -0.128 | 1.000 | 0.566 |
| BAND 7 | -0.435 | -0.527 | 0.566 | 1.000 |

BAND RATIO PARAMETER 0.229
TRANSFORMED PARAMETER 0.854



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 A
IMAGE IDENTIFIER: 1448-17450
DATE ACQUIRED: 14OCT73

CELLS 1601 TO 1606
LINES 2109 TO 2112
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

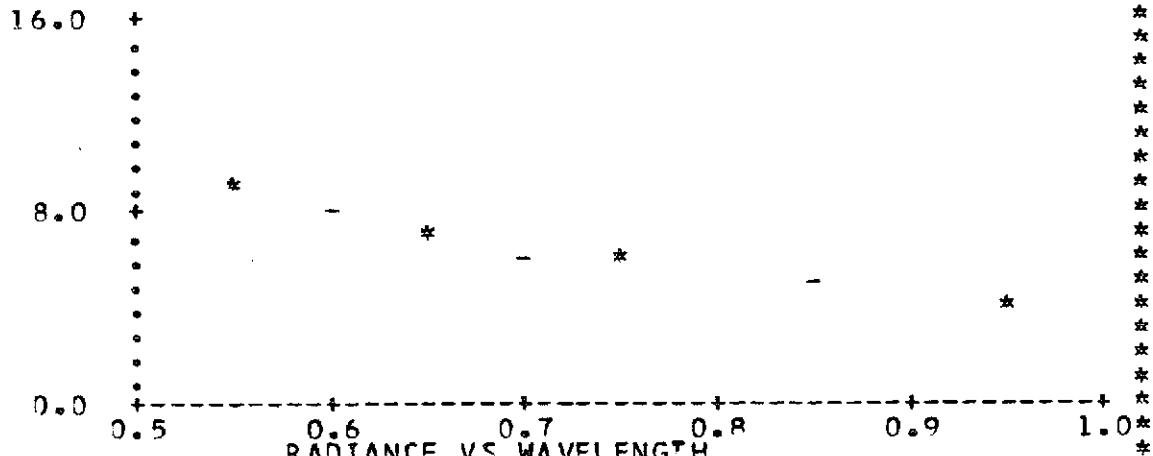
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.31 | 0.29 | .5 - .6 |
| BAND 5 | 7.08 | 0.27 | .6 - .7 |
| BAND 6 | 6.06 | 0.37 | .7 - .8 |
| BAND 7 | 4.42 | 0.13 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | -0.029 | 0.219 | 0.175 |
| BAND 5 | -0.029 | 1.000 | 0.520 | 0.330 |
| BAND 6 | 0.219 | 0.520 | 1.000 | 0.071 |
| BAND 7 | 0.175 | 0.330 | 0.071 | 1.000 |

BAND RATIO PARAMETER -0.231
TRANSFORMED PARAMETER 0.518



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 21MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: PM 3 P
IMAGE IDENTIFIER: 1448-17450
DATE ACQUIRED: 140CT73

CELLS 1579 TO 1590
LINES 2126 TO 2143
TOTAL POINTS 216

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

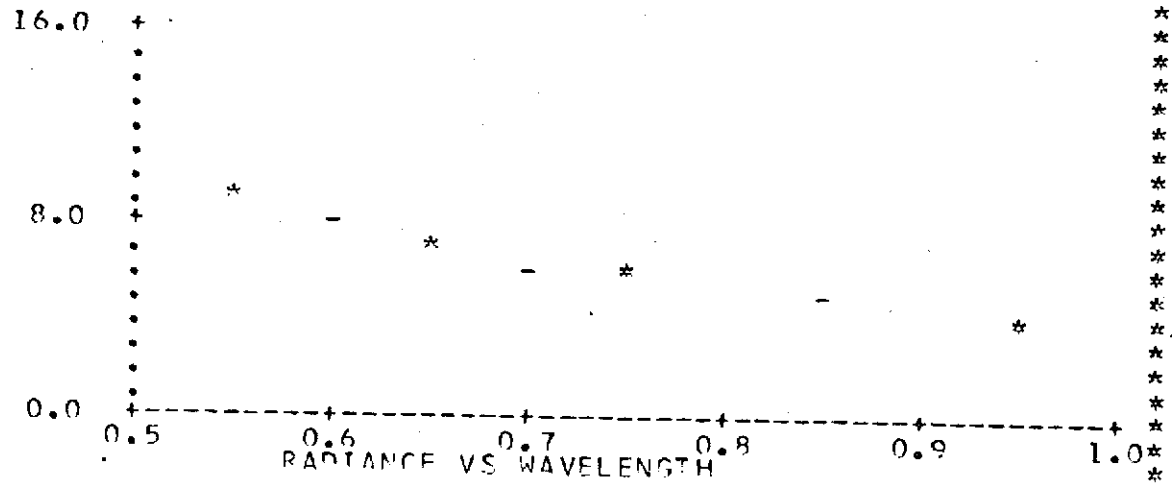
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.04 | 0.95 | .5 - .6 |
| BAND 5 | 6.94 | 1.02 | .6 - .7 |
| BAND 6 | 6.46 | 3.61 | .7 - .8 |
| BAND 7 | 4.35 | 0.79 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.923 | 0.243 | 0.899 |
| BAND 5 | 0.923 | 1.000 | 0.221 | 0.926 |
| BAND 6 | 0.243 | 0.221 | 1.000 | 0.168 |
| BAND 7 | 0.899 | 0.926 | 0.168 | 1.000 |

BAND RATIO PARAMETER -0.230
TRANSFORMED PARAMETER 0.520




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DATA ANALYSIS LABORATORY 20MAY74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 3 W
IMAGE IDENTIFIER: 1448-17450
DATE ACQUIRED: 14OCT73

CELLS 1607 TO 1612
LINES 2110 TO 2114
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

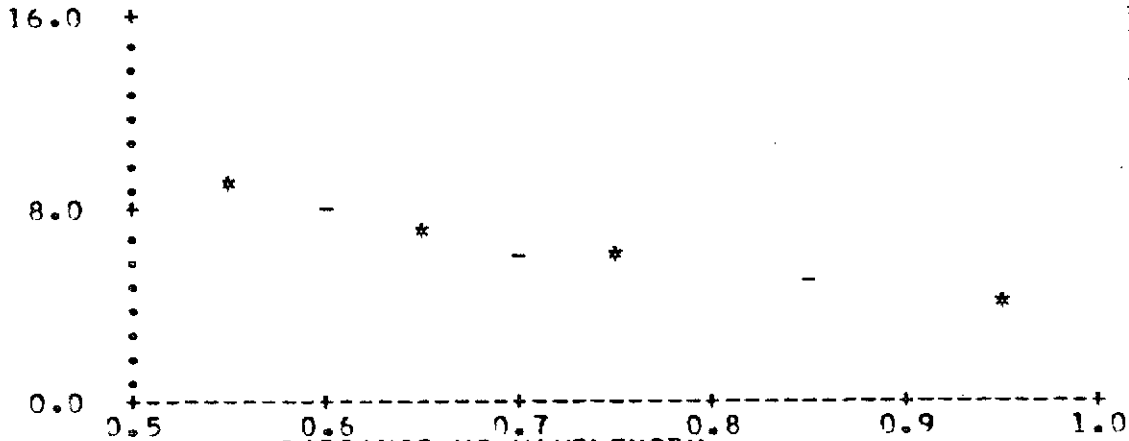
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.83 | 0.44 | .5 - .6 |
| BAND 5 | 6.67 | 0.33 | .6 - .7 |
| BAND 6 | 5.52 | 0.37 | .7 - .8 |
| BAND 7 | 4.27 | 0.28 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.489 | 0.642 | 0.599 |
| BAND 5 | 0.489 | 1.000 | 0.557 | 0.379 |
| BAND 6 | 0.642 | 0.557 | 1.000 | 0.424 |
| BAND 7 | 0.599 | 0.379 | 0.424 | 1.000 |

BAND RATIO PARAMETER -0.220
TRANSFORMED PARAMETER 0.529




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 21MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1015-17413
DATE ACQUIRED: 07AUG72

CELLS 183 TO 188
LINES 1388 TO 1396
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

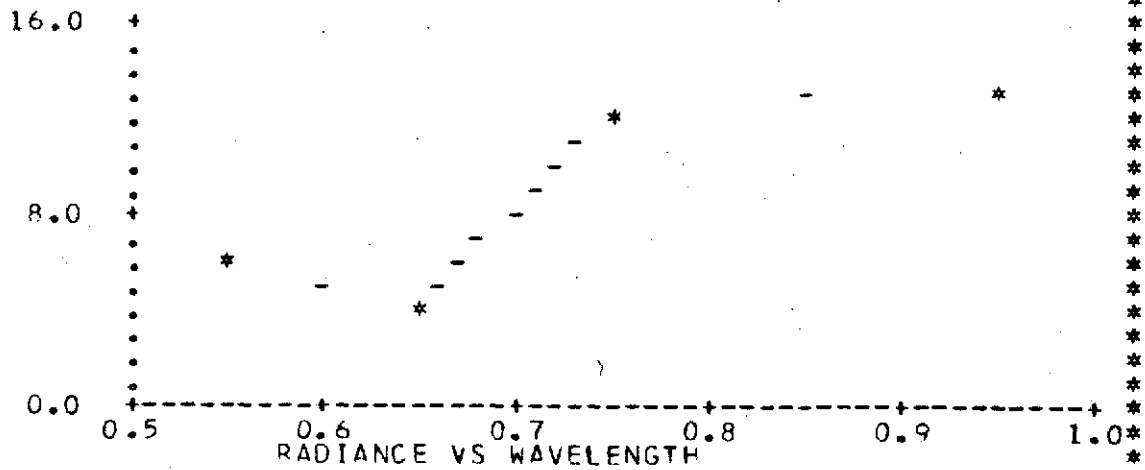
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.25 | 0.70 | .5 - .6 |
| BAND 5 | 3.77 | 1.02 | .6 - .7 |
| BAND 6 | 11.72 | 0.90 | .7 - .8 |
| BAND 7 | 13.02 | 1.31 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.970 | -0.795 | -0.886 |
| BAND 5 | 0.970 | 1.000 | -0.779 | -0.874 |
| BAND 6 | -0.795 | -0.779 | 1.000 | 0.892 |
| BAND 7 | -0.886 | -0.874 | 0.892 | 1.000 |

BAND RATIO PARAMETER 0.551
TRANSFORMED PARAMETER 1.025



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30AUG73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1015-17413
DATE ACQUIRED: 07AUG72

CELLS 183 TO 192
LINES 1373 TO 1381
TOTAL POINTS 90

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

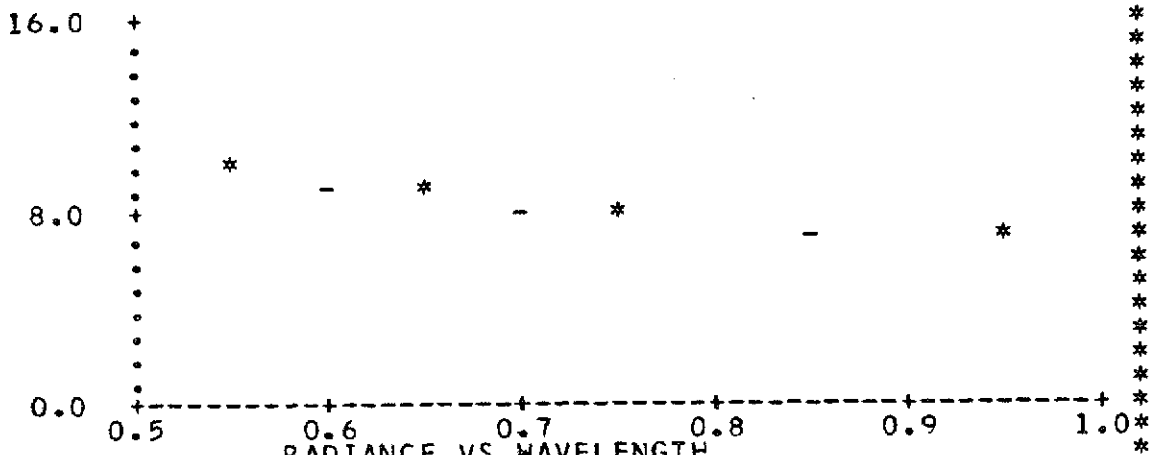
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.60 | 0.68 | .5 - .6 |
| BAND 5 | 8.73 | 0.78 | .6 - .7 |
| BAND 6 | 8.02 | 0.69 | .7 - .8 |
| BAND 7 | 6.80 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.853 | 0.855 | 0.793 |
| BAND 5 | 0.853 | 1.000 | 0.851 | 0.802 |
| BAND 6 | 0.855 | 0.851 | 1.000 | 0.872 |
| BAND 7 | 0.793 | 0.802 | 0.872 | 1.000 |

BAND RATIO PARAMETER -0.124
TRANSFORMED PARAMETER 0.613



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28AUG73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1015-17413
DATE ACQUIRED: 07AUG72

CELLS 201 TO 204
LINES 1431 TO 1440
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

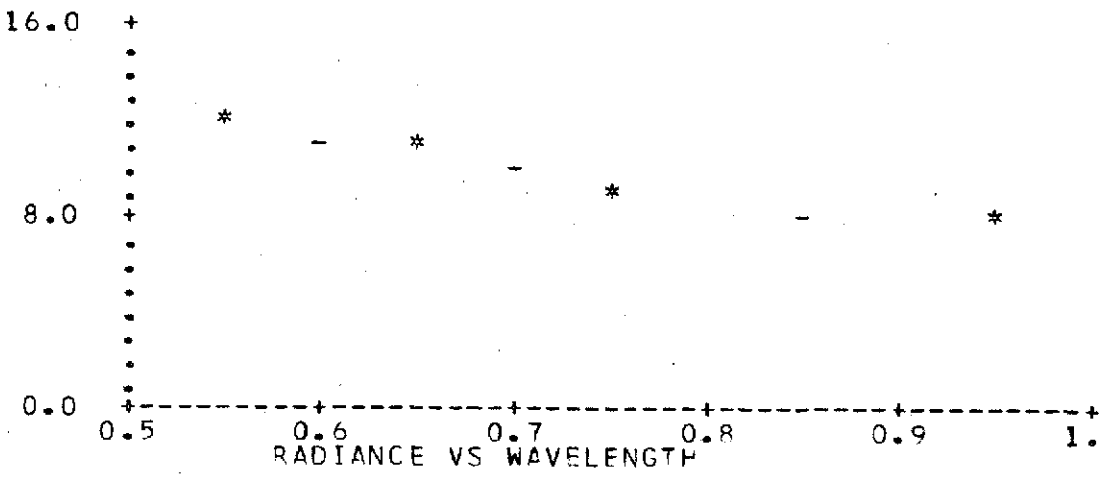
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.61 | 0.83 | .5 - .6 |
| BAND 5 | 10.54 | 0.80 | .6 - .7 |
| BAND 6 | 9.34 | 0.60 | .7 - .8 |
| BAND 7 | 7.72 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.905 | 0.854 | 0.802 |
| BAND 5 | 0.905 | 1.000 | 0.790 | 0.750 |
| BAND 6 | 0.854 | 0.790 | 1.000 | 0.793 |
| BAND 7 | 0.802 | 0.750 | 0.793 | 1.000 |

BAND RATIO PARAMETER -0.154
TRANSFORMED PARAMETER 0.588




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 1 CELLS 153 TO 160
IMAGE IDENTIFIER: 1033-17414 LINES 692 TO 700
DATE ACQUIRED: 25AUG72 TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

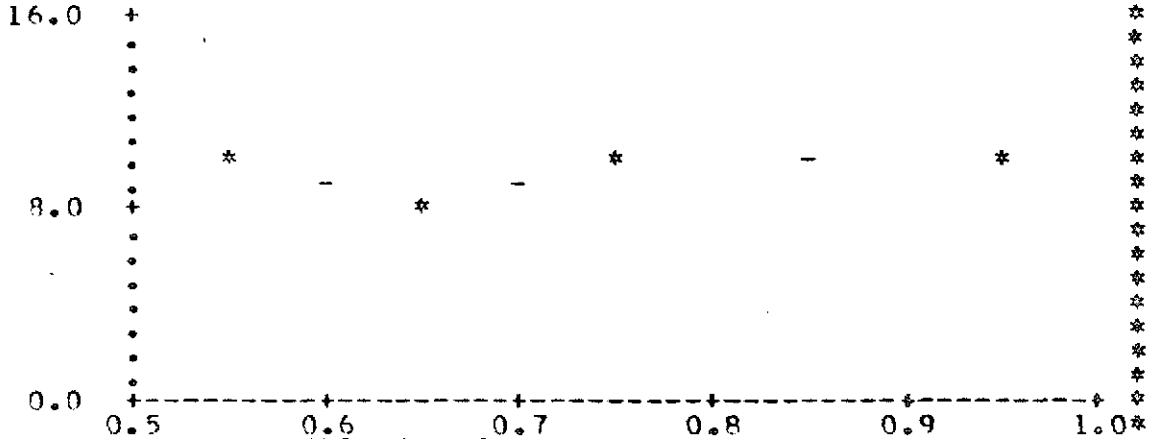
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.73 | 1.11 | .5 - .6 |
| BAND 5 | 8.09 | 1.64 | .6 - .7 |
| BAND 6 | 10.47 | 0.62 | .7 - .8 |
| BAND 7 | 10.14 | 0.77 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.952 | 0.511 | -0.146 |
| BAND 5 | 0.952 | 1.000 | 0.423 | -0.279 |
| BAND 6 | 0.511 | 0.423 | 1.000 | 0.606 |
| BAND 7 | -0.146 | -0.279 | 0.606 | 1.000 |

BAND RATIO PARAMETER 0.112
TRANSFORMED PARAMETER 0.782



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03SEP73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1033-17414
DATE ACQUIRED: 25AUG72

CELLS 153 TO 164
LINES 676 TO 686
TOTAL POINTS 132

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

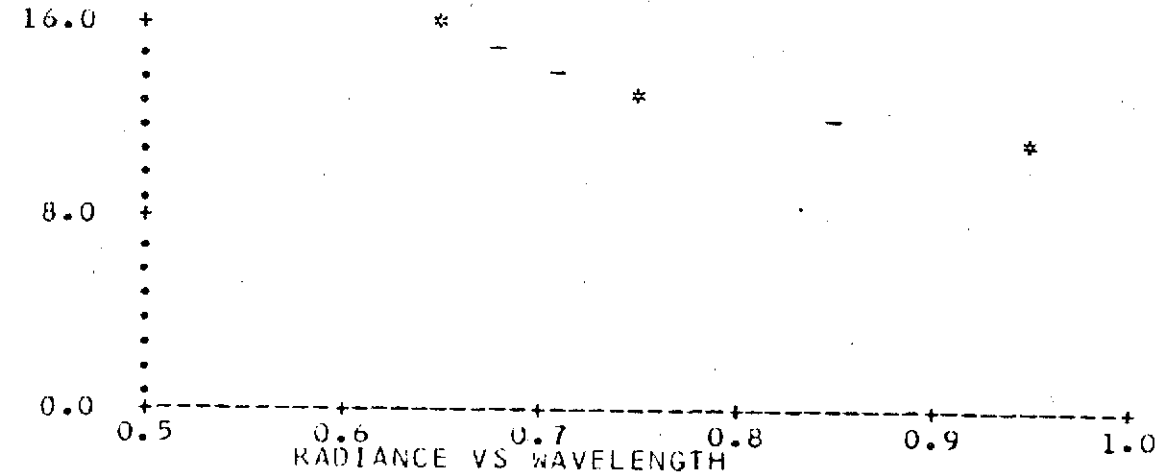
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 18.53 | 7.56 | .5 - .6 |
| BAND 5 | 15.50 | 5.93 | .6 - .7 |
| BAND 6 | 13.49 | 4.71 | .7 - .8 |
| BAND 7 | 10.99 | 3.68 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.996 | 0.991 | 0.985 |
| BAND 5 | 0.996 | 1.000 | 0.992 | 0.988 |
| BAND 6 | 0.991 | 0.992 | 1.000 | 0.992 |
| BAND 7 | 0.985 | 0.988 | 0.992 | 1.000 |

BAND RATIO PARAMETER -0.170
TRANSFORMED PARAMETER 0.574



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30AUG73

ORIGINAL PAGE IS
OF POOR QUALITY

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1033-17414
DATE ACQUIRED: 25AUG72

CELLS 169 TO 174
LINES 736 TO 744
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

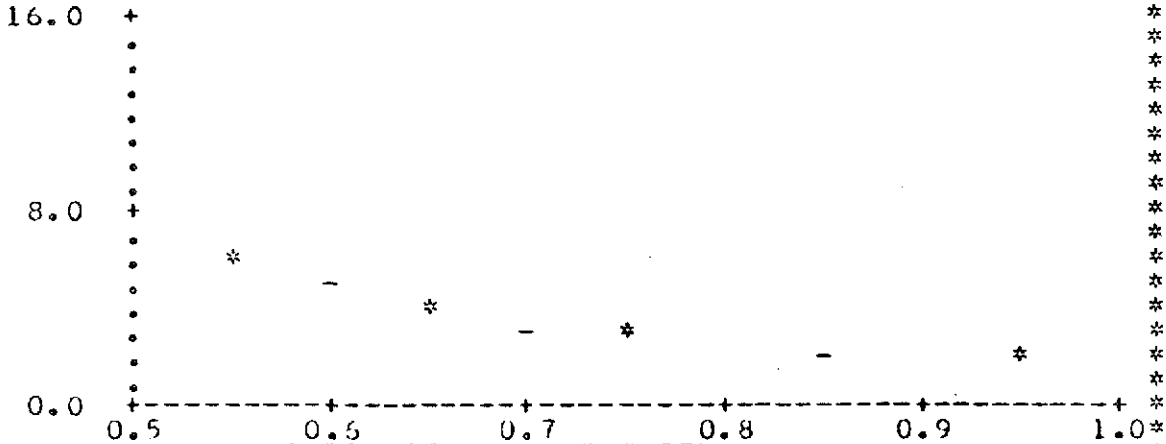
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 5.80 | 0.35 | .5 - .6 |
| BAND 5 | 3.63 | 0.33 | .6 - .7 |
| BAND 6 | 2.59 | 0.29 | .7 - .8 |
| BAND 7 | 1.67 | 0.21 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.649 | 0.452 | 0.309 |
| BAND 5 | 0.649 | 1.000 | 0.779 | 0.370 |
| BAND 6 | 0.452 | 0.779 | 1.000 | 0.423 |
| BAND 7 | 0.309 | 0.370 | 0.423 | 1.000 |

BAND RATIO PARAMETER -0.371
TRANSFORMED PARAMETER 0.360



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1034-17473
DATE ACQUIRED: 26AUG72

CELLS 2169 TO 2174
LINES 591 TO 599
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 50 DEGREES***

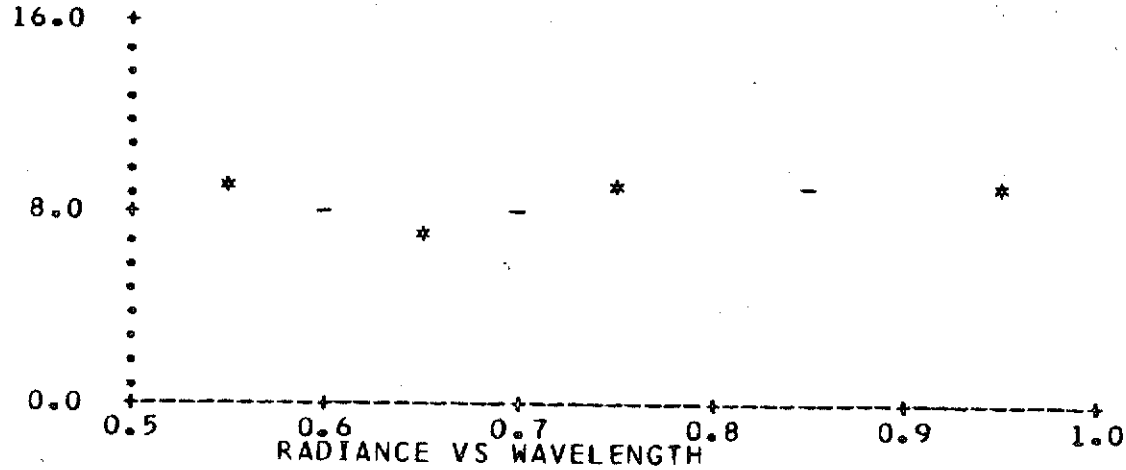
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.85 | 0.72 | .5 - .6 |
| BAND 5 | 7.19 | 1.03 | .6 - .7 |
| BAND 6 | 9.13 | 0.62 | .7 - .8 |
| BAND 7 | 8.90 | 0.73 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.876 | 0.267 | -0.204 |
| BAND 5 | 0.876 | 1.000 | 0.077 | -0.397 |
| BAND 6 | 0.267 | 0.077 | 1.000 | 0.786 |
| BAND 7 | -0.204 | -0.397 | 0.786 | 1.000 |

BAND RATIO PARAMETER 0.106
TRANSFORMED PARAMETER 0.779




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1034-17473
DATE ACQUIRED: 26AUG72

CELLS 2169 TO 2178
LINES 576 TO 585
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 50 DEGREES***

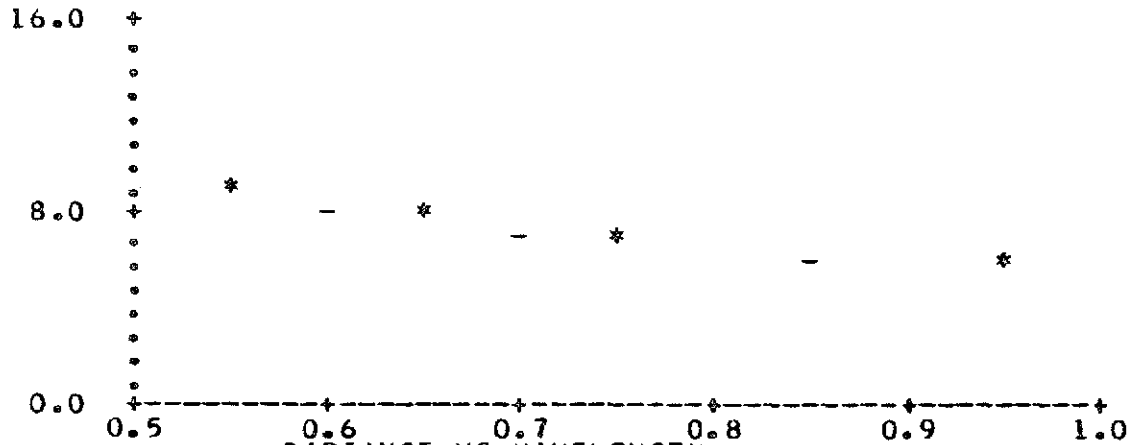
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.44 | 0.67 | .5 - .6 |
| BAND 5 | 8.27 | 0.89 | .6 - .7 |
| BAND 6 | 7.47 | 0.72 | .7 - .8 |
| BAND 7 | 6.34 | 0.71 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.919 | 0.494 | 0.244 |
| BAND 5 | 0.919 | 1.000 | 0.494 | 0.256 |
| BAND 6 | 0.494 | 0.494 | 1.000 | 0.891 |
| BAND 7 | 0.244 | 0.256 | 0.891 | 1.000 |

BAND RATIO PARAMETER -0.132
TRANSFORMED PARAMETER 0.607



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1034-17473
DATE ACQUIRED: 26AUG72

CELLS 2185 TO 2190
LINES 634 TO 643
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 50 DEGREES***

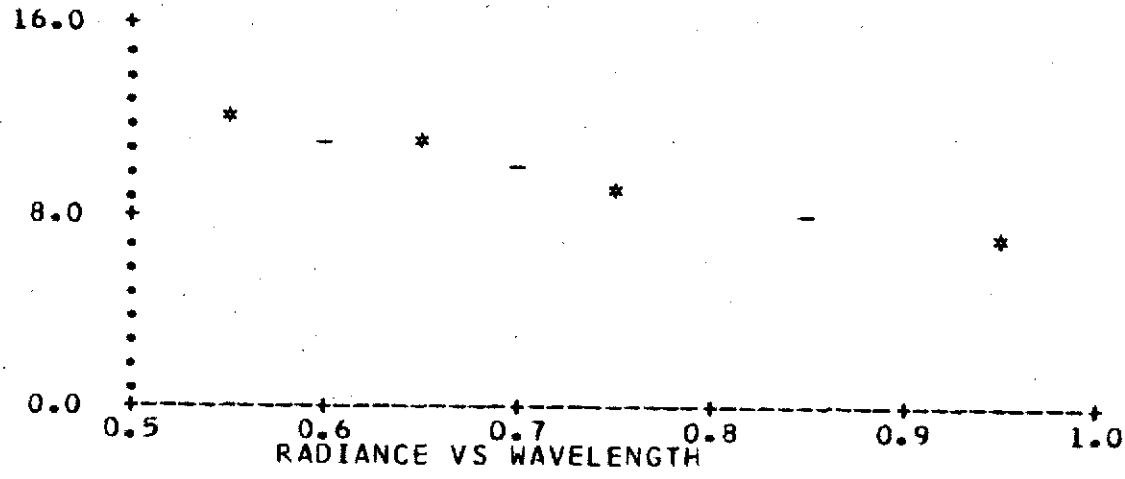
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.75 | 0.78 | .5 - .6 |
| BAND 5 | 10.67 | 0.81 | .6 - .7 |
| BAND 6 | 8.90 | 0.66 | .7 - .8 |
| BAND 7 | 7.32 | 0.45 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.865 | 0.778 | 0.784 |
| BAND 5 | 0.865 | 1.000 | 0.869 | 0.867 |
| BAND 6 | 0.778 | 0.869 | 1.000 | 0.862 |
| BAND 7 | 0.784 | 0.867 | 0.862 | 1.000 |

BAND RATIO PARAMETER -0.186
TRANSFORMED PARAMETER 0.561




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1051-17414
DATE ACQUIRED: 12SEP72

CELLS 113 TO 118
LINES 1028 TO 1034
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

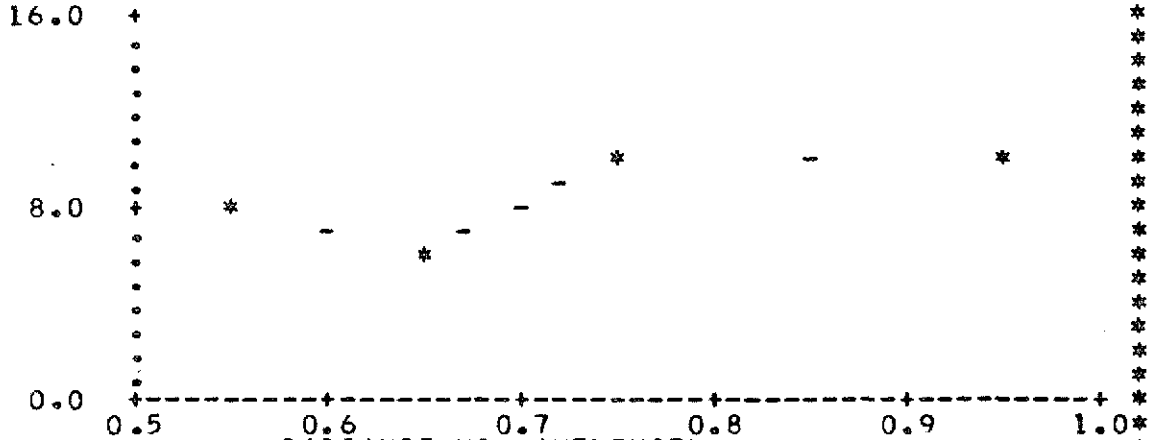
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.20 | 1.20 | .5 - .6 |
| BAND 5 | 5.60 | 1.86 | .6 - .7 |
| BAND 6 | 10.15 | 0.74 | .7 - .8 |
| BAND 7 | 10.35 | 0.98 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.975 | -0.064 | -0.528 |
| BAND 5 | 0.975 | 1.000 | -0.077 | -0.536 |
| BAND 6 | -0.064 | -0.077 | 1.000 | 0.769 |
| BAND 7 | -0.528 | -0.536 | 0.769 | 1.000 |

BAND RATIO PARAMETER 0.297
TRANSFORMED PARAMETER 0.893




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1051-17414
DATE ACQUIRED: 12SEP72

CELLS 113 TO 120
LINES 1016 TO 1023
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

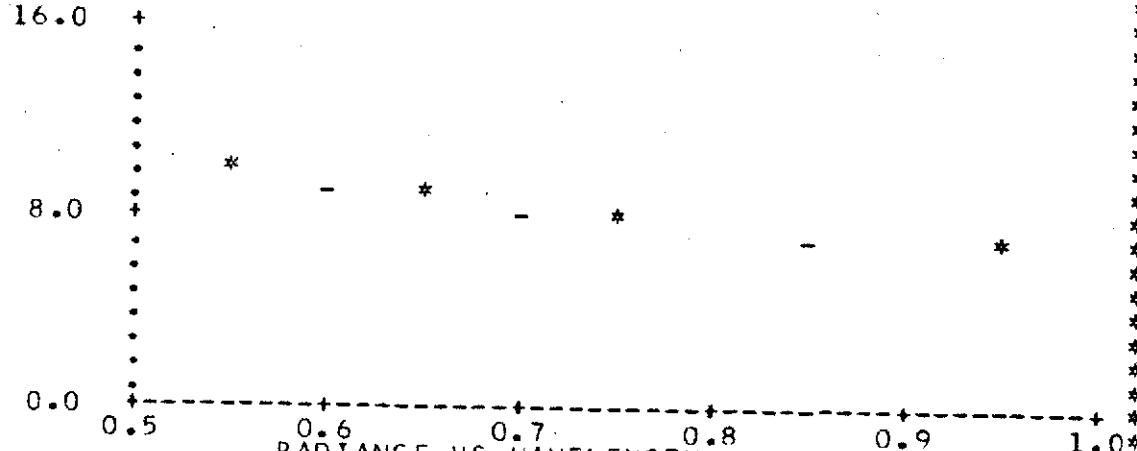
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.31 | 0.87 | .5 - .6 |
| BAND 5 | 8.91 | 1.09 | .6 - .7 |
| BAND 6 | 7.78 | 0.98 | .7 - .8 |
| BAND 7 | 6.62 | 0.87 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.921 | 0.867 | 0.888 |
| BAND 5 | 0.921 | 1.000 | 0.943 | 0.908 |
| BAND 6 | 0.867 | 0.943 | 1.000 | 0.947 |
| BAND 7 | 0.888 | 0.908 | 0.947 | 1.000 |

BAND RATIO PARAMETER -0.148
TRANSFORMED PARAMETER 0.593




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DATA ANALYSIS LABORATORY 30AUG73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1051-17414
DATE ACQUIRED: 12SEP72

CELLS 127 TO 130
LINES 1060 TO 1067
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

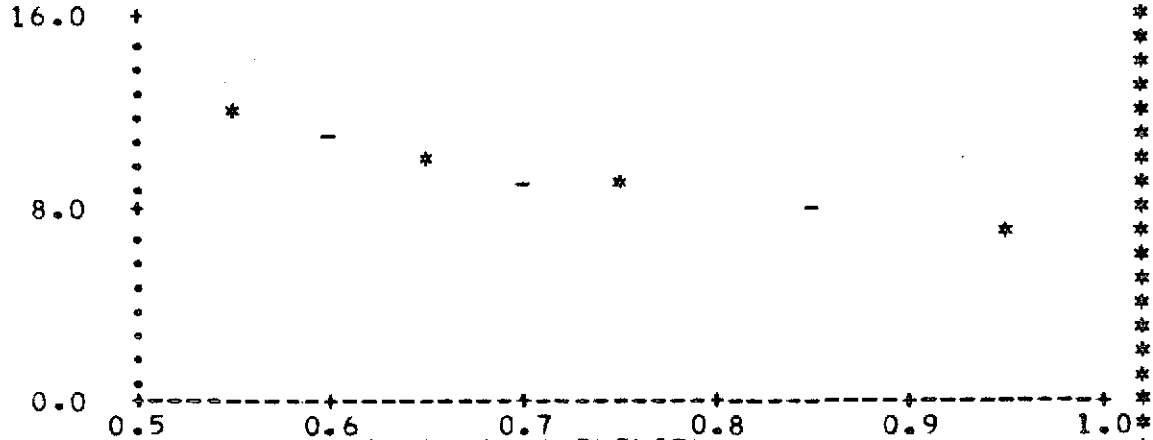
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.99 | 0.89 | .5 - .6 |
| BAND 5 | 10.47 | 0.86 | .6 - .7 |
| BAND 6 | 8.88 | 0.68 | .7 - .8 |
| BAND 7 | 7.38 | 0.49 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.872 | 0.859 | 0.841 |
| BAND 5 | 0.872 | 1.000 | 0.849 | 0.810 |
| BAND 6 | 0.859 | 0.849 | 1.000 | 0.898 |
| BAND 7 | 0.841 | C.810 | 0.898 | 1.000 |

BAND RATIO PARAMETER -0.173
TRANSFORMED PARAMETER 0.572




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30AUG73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR RM 4 A
IMAGE IDENTIFIER 1069-17414
DATE ACQUIRED 30SEP72

CELLS 39 TO 44
LINES 1001 TO 1009
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

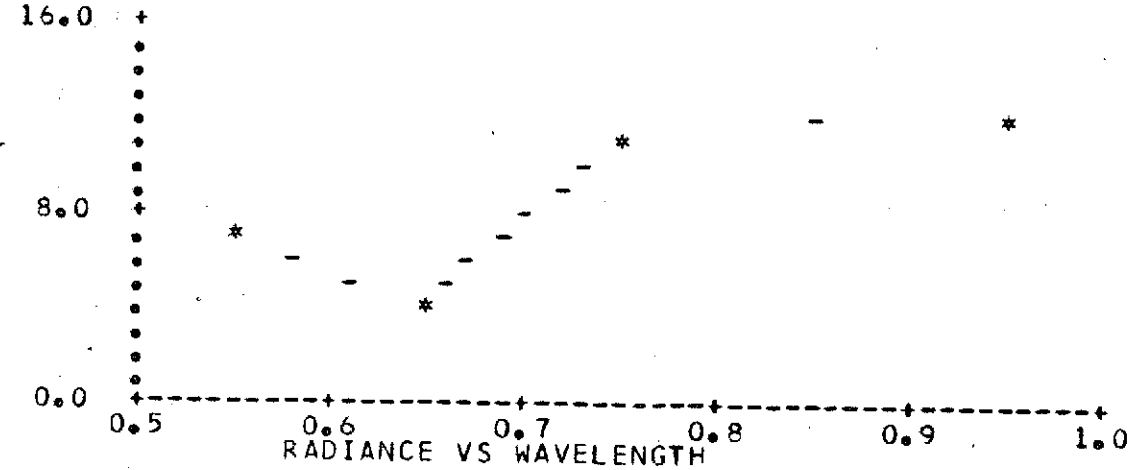
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.18 | 0.75 | .5 - .6 |
| BAND 5 | 3.93 | 1.02 | .6 - .7 |
| BAND 6 | 11.24 | 0.80 | .7 - .8 |
| BAND 7 | 12.20 | 1.08 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.852 | -0.750 | -0.763 |
| BAND 5 | 0.852 | 1.000 | -0.800 | -0.859 |
| BAND 6 | -0.750 | -0.800 | 1.000 | 0.861 |
| BAND 7 | -0.763 | -0.859 | 0.861 | 1.000 |

BAND RATIO PARAMETER 0.512
TRANSFORMED PARAMETER 1.006



RADIANCE VS WAVELENGTH

PREPARED BY TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23AUG73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR RM 4 R
IMAGE IDENTIFIER 1069-17414
DATE ACQUIRED 30SEP72

CELLS 39 TO 48
LINES 986 TO 994
TOTAL POINTS 90

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

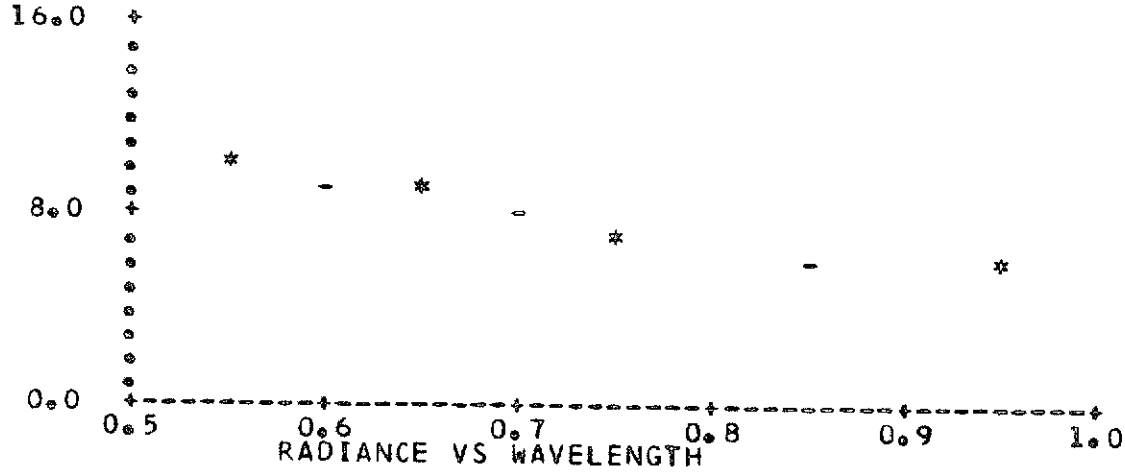
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.36 | 0.68 | .5 - .6 |
| BAND 5 | 8.57 | 0.81 | .6 - .7 |
| BAND 6 | 7.46 | 0.70 | .7 - .8 |
| BAND 7 | 6.44 | 0.54 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.844 | 0.718 | 0.806 |
| BAND 5 | 0.844 | 1.000 | 0.839 | 0.836 |
| BAND 6 | 0.718 | 0.839 | 1.000 | 0.812 |
| BAND 7 | 0.806 | 0.836 | 0.812 | 1.000 |

BAND RATIO PARAMETER -0.142
TRANSFORMED PARAMETER 0.598



RADIANCE VS WAVELENGTH

PREPARED BY TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23AUG73

# ERTS-1
# SITE PROCESSING REPORT

| | | | |
|---|---|---|---|
| SITE DESIGNATOR | RM 4 W | CELLS | 57 TO 60 |
| IMAGE IDENTIFIER | 1069-17414 | LINES | 1045 TO 1053 |
| DATE ACQUIRED | 30SEP72 | TOTAL POINTS | 36 |

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

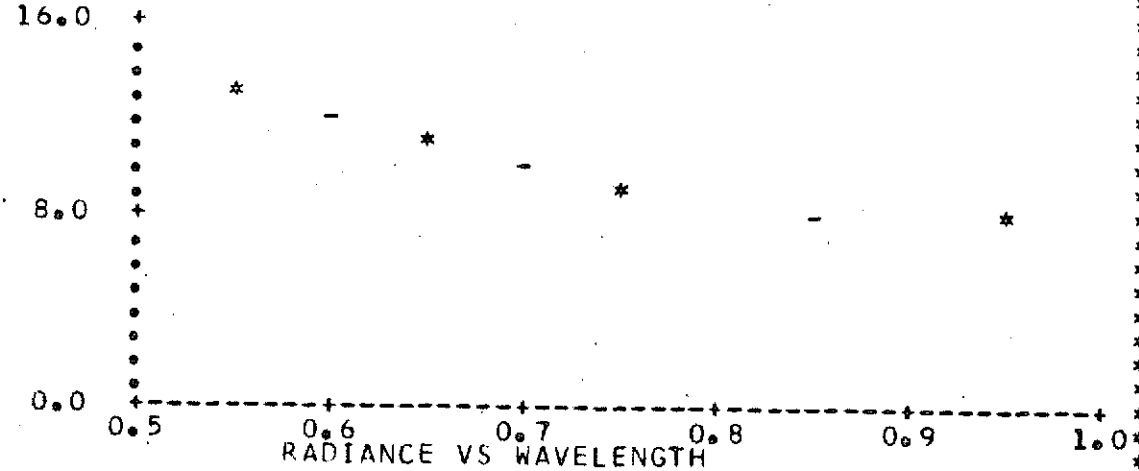
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.76 | 0.70 | .5 - .6 |
| BAND 5 | 11.05 | 0.57 | .6 - .7 |
| BAND 6 | 9.25 | 0.45 | .7 - .8 |
| BAND 7 | 7.64 | 0.47 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.767 | 0.669 | 0.647 |
| BAND 5 | 0.767 | 1.000 | 0.823 | 0.739 |
| BAND 6 | 0.669 | 0.823 | 1.000 | 0.700 |
| BAND 7 | 0.647 | 0.739 | 0.700 | 1.000 |

BAND RATIO PARAMETER -0.182
TRANSFORMED PARAMETER 0.564




RADIANCE VS WAVELENGTH

PREPARED BY TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23AUG73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1106-17481
DATE ACQUIRED: 06NOV72

CELLS 2219 TO 2226
LINES 399 TO 407
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

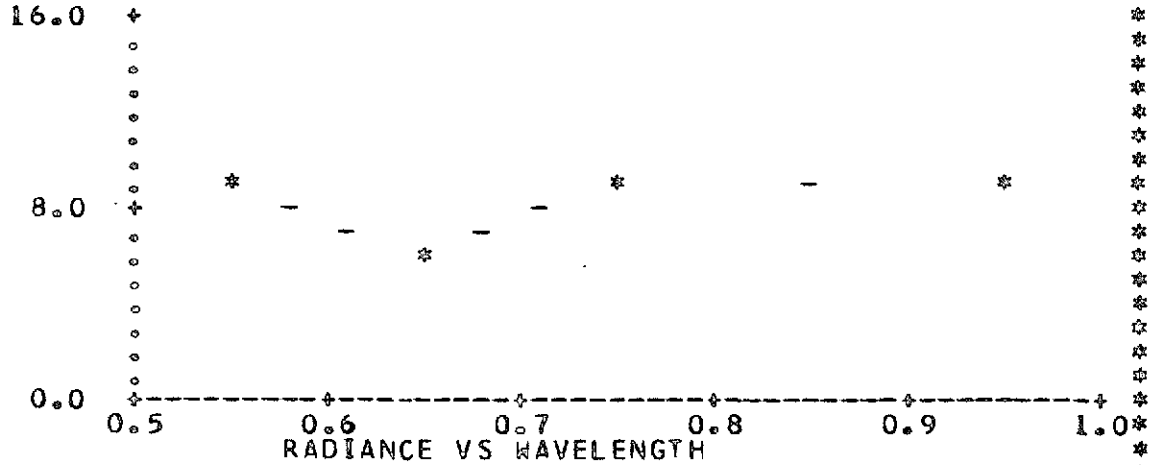
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.98 | 0.99 | .5 - .6 |
| BAND 5 | 6.14 | 1.16 | .6 - .7 |
| BAND 6 | 8.67 | 0.67 | .7 - .8 |
| BAND 7 | 8.71 | 1.06 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.885 | -0.192 | -0.665 |
| BAND 5 | 0.885 | 1.000 | -0.402 | -0.785 |
| BAND 6 | -0.192 | -0.402 | 1.000 | 0.656 |
| BAND 7 | -0.665 | -0.785 | 0.656 | 1.000 |

BAND RATIO PARAMETER 0.173
TRANSFORMED PARAMETER 0.820



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1106-17481
DATE ACQUIRED: 06NOV72

CELLS 2219 TO 2228
LINES 384 TO 393
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

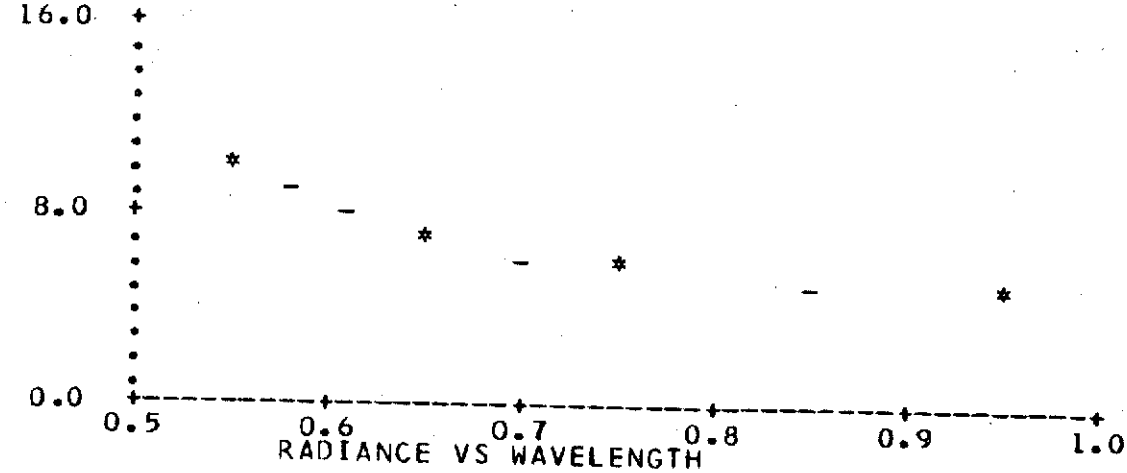
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.58 | 0.80 | .5 - .6 |
| BAND 5 | 6.88 | 0.83 | .6 - .7 |
| BAND 6 | 6.41 | 0.79 | .7 - .8 |
| BAND 7 | 5.48 | 0.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.846 | 0.765 | 0.730 |
| BAND 5 | 0.846 | 1.000 | 0.845 | 0.843 |
| BAND 6 | 0.765 | 0.845 | 1.000 | 0.845 |
| BAND 7 | 0.730 | 0.843 | 0.845 | 1.000 |

BAND RATIO PARAMETER -0.113
TRANSFORMED PARAMETER 0.622



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1106-17481
DATE ACQUIRED: 06NOV72

CELLS 2233 TO 2238
LINES 443 TO 451
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

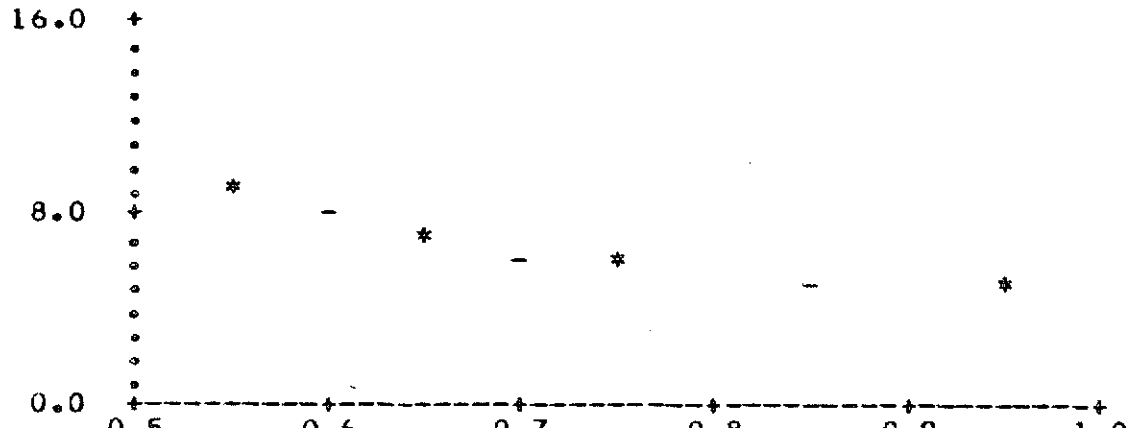
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.47 | 1.10 | .5 - .6 |
| BAND 5 | 6.96 | 1.22 | .6 - .7 |
| BAND 6 | 6.29 | 1.11 | .7 - .8 |
| BAND 7 | 5.24 | 1.11 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.945 | 0.923 | 0.882 |
| BAND 5 | 0.945 | 1.000 | 0.907 | 0.877 |
| BAND 6 | 0.923 | 0.907 | 1.000 | 0.904 |
| BAND 7 | 0.882 | 0.877 | 0.904 | 1.000 |

BAND RATIO PARAMETER -0.141
TRANSFORMED PARAMETER 0.599




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1303-17423
DATE ACQUIRED: 22MAY73

CELLS 497 TO 502
LINES 1122 TO 1130
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

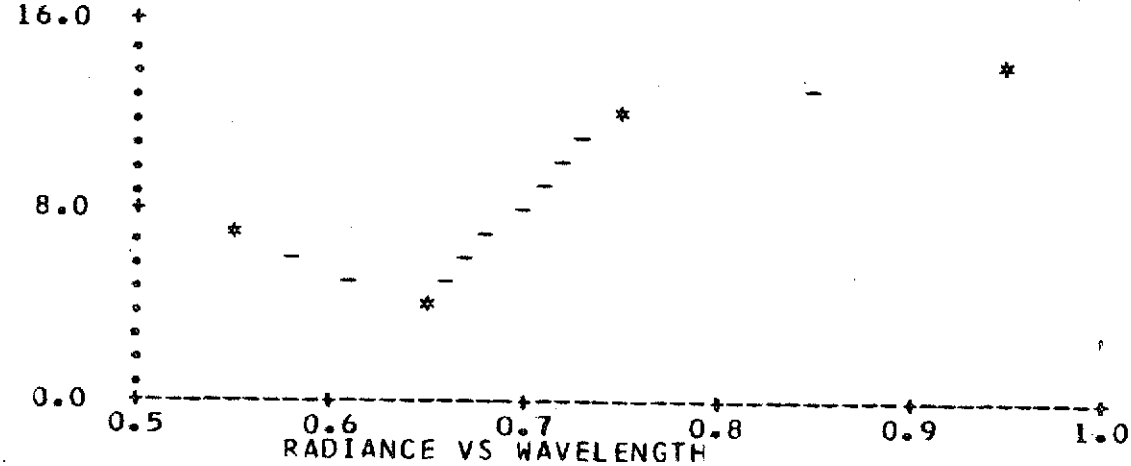
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.87 | 0.77 | .5 - .6 |
| BAND 5 | 4.07 | 1.07 | .6 - .7 |
| BAND 6 | 12.28 | 1.44 | .7 - .8 |
| BAND 7 | 13.76 | 2.03 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.910 | -0.591 | -0.679 |
| BAND 5 | 0.910 | 1.000 | -0.753 | -0.825 |
| BAND 6 | -0.591 | -0.753 | 1.000 | 0.959 |
| BAND 7 | -0.679 | -0.825 | 0.959 | 1.000 |

BAND RATIO PARAMETER 0.543
TRANSFORMED PARAMETER 1.022



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1303-17423
DATE ACQUIRED: 22MAY73

CELLS 497 TO 506
LINES 1107 TO 1116
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

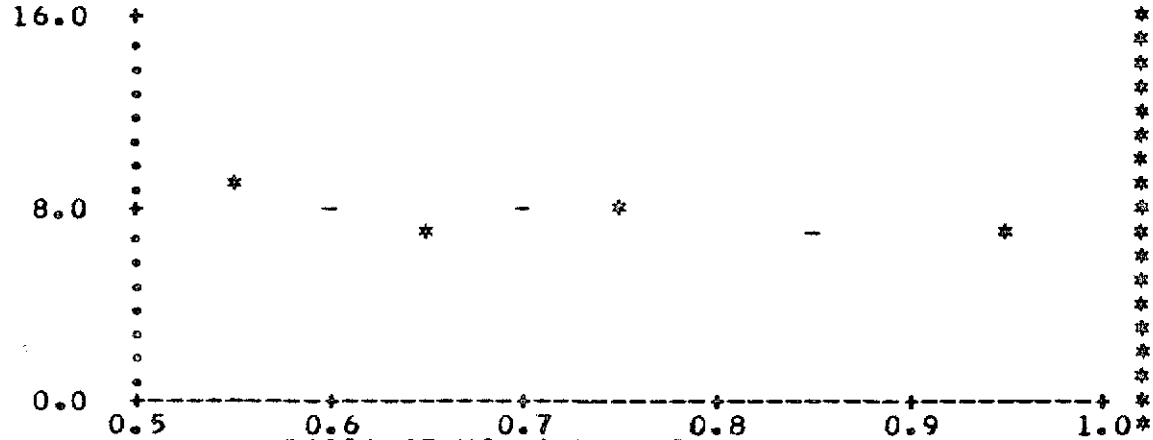
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.94 | 0.55 | .5 - .6 |
| BAND 5 | 7.15 | 0.65 | .6 - .7 |
| BAND 6 | 7.74 | 0.57 | .7 - .8 |
| BAND 7 | 7.02 | 0.60 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.852 | 0.739 | 0.693 |
| BAND 5 | 0.852 | 1.000 | 0.739 | 0.737 |
| BAND 6 | 0.739 | 0.739 | 1.000 | 0.900 |
| BAND 7 | 0.693 | 0.737 | 0.900 | 1.000 |

BAND RATIO PARAMETER -0.009
TRANSFORMED PARAMETER 0.700



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1303-17423
DATE ACQUIRED: 22MAY73

CELLS 513 TO 520
LINES 1166 TO 1173
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

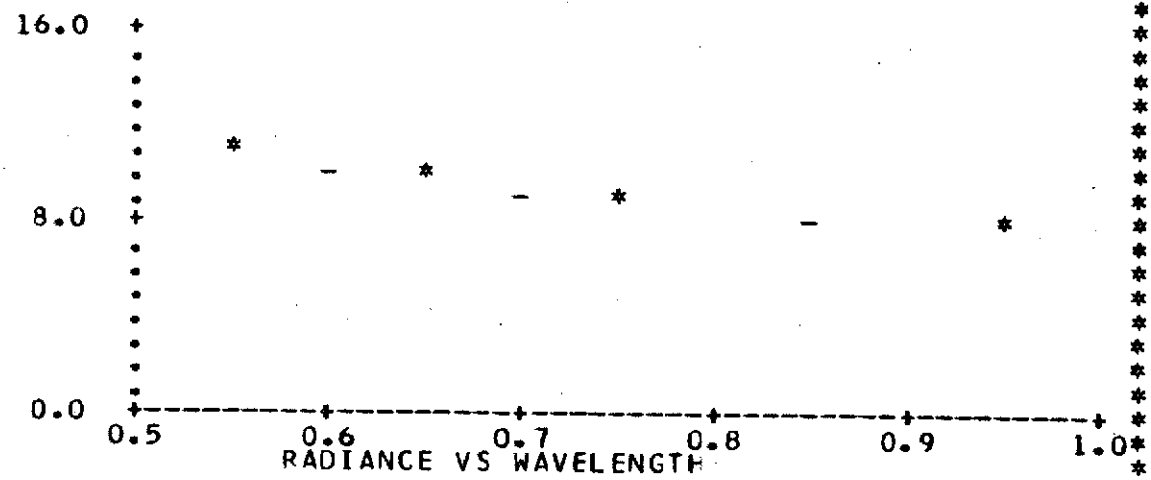
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.41 | 0.95 | .5 - .6 |
| BAND 5 | 9.90 | 0.99 | .6 - .7 |
| BAND 6 | 9.30 | 0.65 | .7 - .8 |
| BAND 7 | 8.08 | 0.53 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.901 | 0.871 | 0.760 |
| BAND 5 | 0.901 | 1.000 | 0.932 | 0.885 |
| BAND 6 | 0.871 | 0.932 | 1.000 | 0.875 |
| BAND 7 | 0.760 | 0.885 | 0.875 | 1.000 |

BAND RATIO PARAMETER -0.101
TRANSFORMED PARAMETER 0.632




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1321-17422
DATE ACQUIRED: 09JUN73

CELLS 501 TO 506
LINES 1136 TO 1144
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

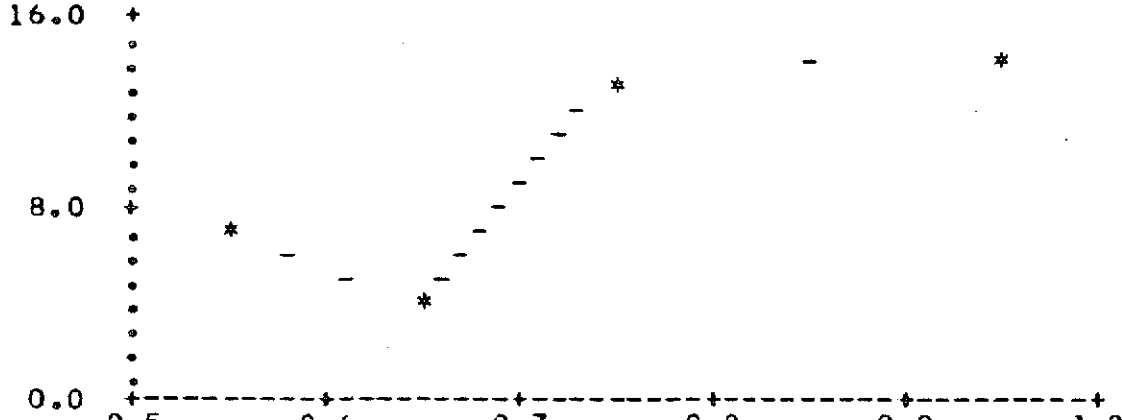
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.66 | 0.57 | .5 - .6 |
| BAND 5 | 3.59 | 0.74 | .6 - .7 |
| BAND 6 | 13.11 | 1.02 | .7 - .8 |
| BAND 7 | 14.32 | 1.41 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.885 | -0.160 | -0.292 |
| BAND 5 | 0.885 | 1.000 | -0.277 | -0.454 |
| BAND 6 | -0.160 | -0.277 | 1.000 | 0.933 |
| BAND 7 | -0.292 | -0.454 | 0.933 | 1.000 |

BAND RATIO PARAMETER 0.599
TRANSFORMED PARAMETER 1.048



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1321-17422
DATE ACQUIRED: 09JUN73

CELLS 501 TO 508
LINES 1121 TO 1129
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

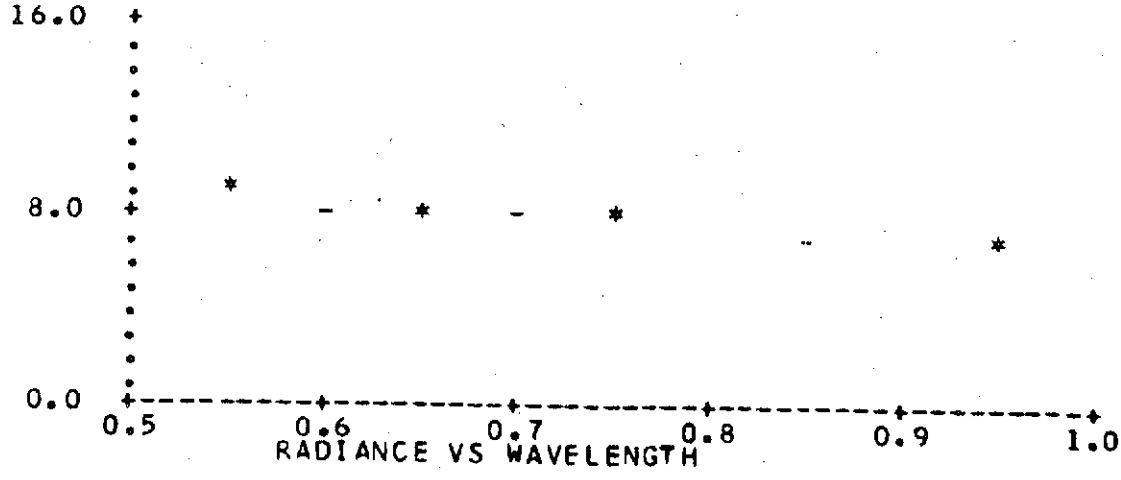
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.47 | 0.75 | .5 - .6 |
| BAND 5 | 7.82 | 0.68 | .6 - .7 |
| BAND 6 | 7.69 | 0.51 | .7 - .8 |
| BAND 7 | 6.61 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.868 | 0.773 | 0.674 |
| BAND 5 | 0.868 | 1.000 | 0.828 | 0.812 |
| BAND 6 | 0.773 | 0.828 | 1.000 | 0.878 |
| BAND 7 | 0.674 | 0.812 | 0.878 | 1.000 |

BAND RATIO PARAMETER -0.084
TRANSFORMED PARAMETER 0.645



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1321-17422
DATE ACQUIRED: 09JUN73

CELLS 517 TO 522
LINES 1180 TO 1188
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

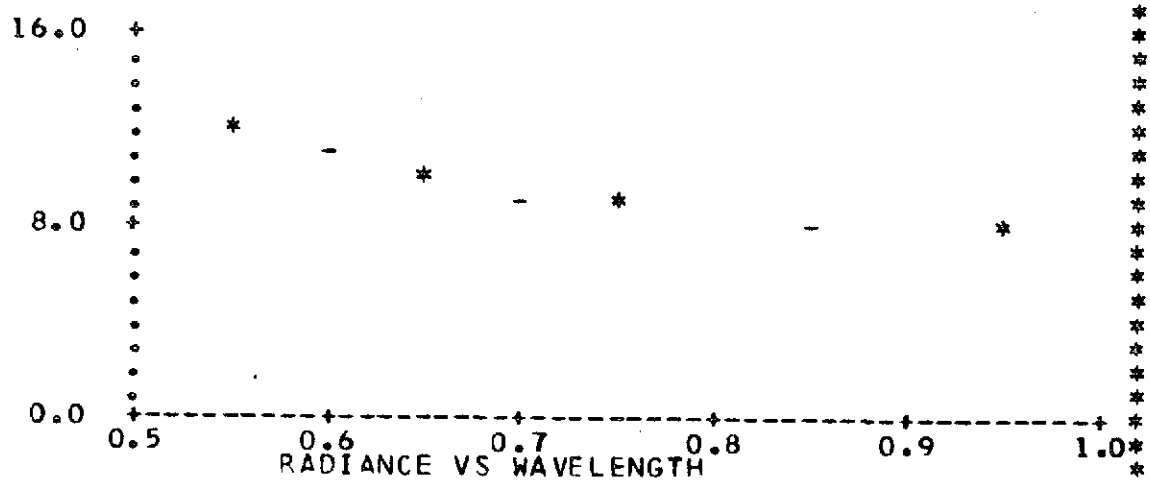
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.65 | 0.94 | .5 - .6 |
| BAND 5 | 10.13 | 0.91 | .6 - .7 |
| BAND 6 | 9.35 | 0.69 | .7 - .8 |
| BAND 7 | 7.79 | 0.53 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.939 | 0.854 | 0.780 |
| BAND 5 | 0.939 | 1.000 | 0.867 | 0.840 |
| BAND 6 | 0.854 | 0.867 | 1.000 | 0.860 |
| BAND 7 | 0.780 | 0.840 | 0.860 | 1.000 |

BAND RATIO PARAMETER -0.131
TRANSFORMED PARAMETER 0.608



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: PM 4 A
IMAGE IDENTIFIER: 1322-17480
DATE ACQUIRED: 10JUN73

CELLS 2529 TO 2534
LINES 870 TO 878
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

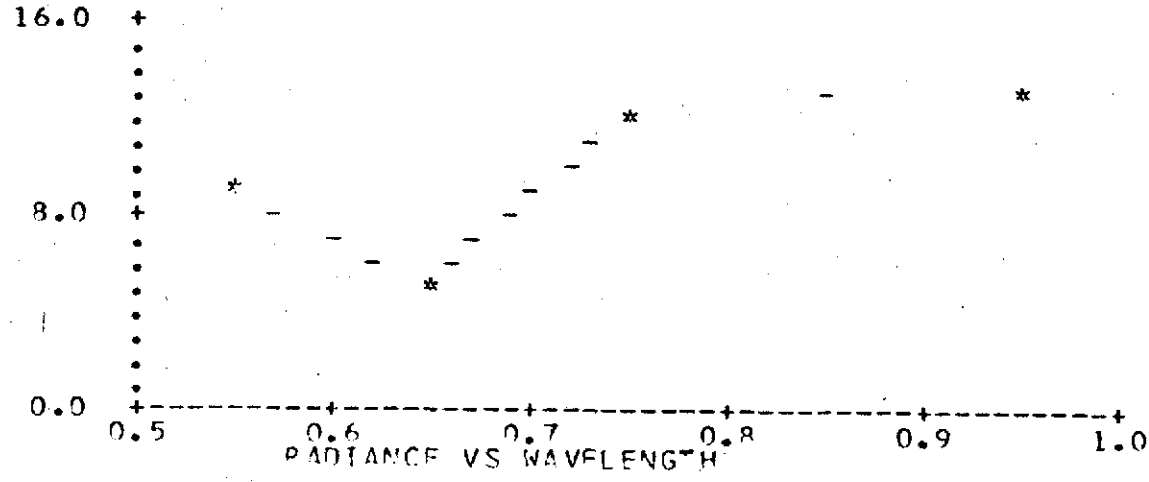
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.60 | 0.75 | .5 - .6 |
| BAND 5 | 5.47 | 1.13 | .6 - .7 |
| BAND 6 | 12.35 | 0.99 | .7 - .8 |
| BAND 7 | 12.80 | 1.43 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.955 | -0.665 | -0.706 |
| BAND 5 | 0.955 | 1.000 | -0.741 | -0.793 |
| BAND 6 | -0.665 | -0.741 | 1.000 | 0.946 |
| BAND 7 | -0.706 | -0.793 | 0.946 | 1.000 |

BAND RATIO PARAMETER 0.402
TRANSFORMED PARAMETER 0.950




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

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OF POOR QUALITY

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1322-17480
DATE ACQUIRED: 10JUN73

CELLS 2529 TO 2536
LINES 855 TO 864
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

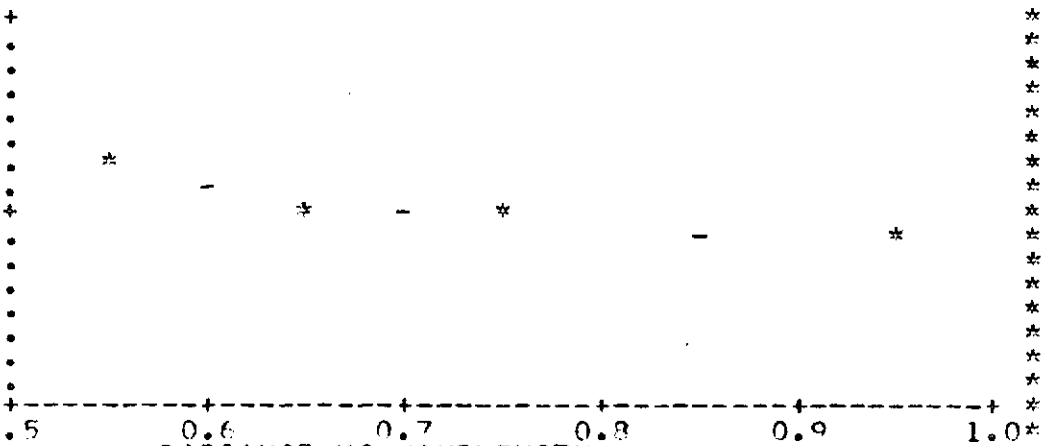
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.38 | 0.58 | .5 - .6 |
| BAND 5 | 8.38 | 0.52 | .6 - .7 |
| BAND 6 | 8.15 | 0.54 | .7 - .8 |
| BAND 7 | 7.03 | 0.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.786 | 0.441 | 0.283 |
| BAND 5 | 0.786 | 1.000 | 0.370 | 0.229 |
| BAND 6 | 0.441 | 0.370 | 1.000 | 0.880 |
| BAND 7 | 0.283 | 0.229 | 0.880 | 1.000 |

BAND RATIO PARAMETER -0.088
TRANSFORMED PARAMETER 0.642




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: PM 4 W
IMAGE IDENTIFIER: 1322-17490
DATE ACQUIRED: 10JUN73

CELLS 2545 TO 2550
LINES 913 TO 921
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

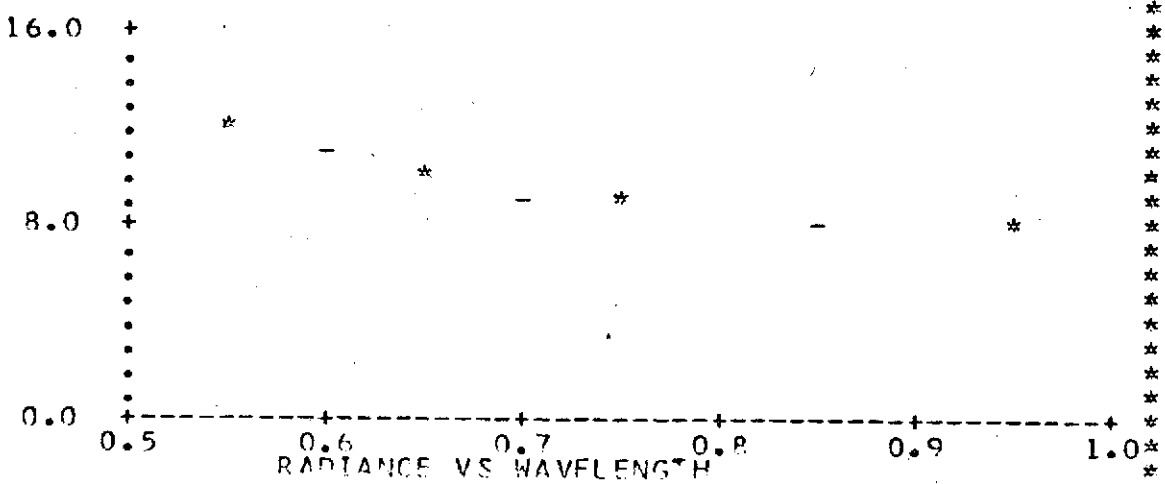
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.84 | 0.91 | .5 - .6 |
| BAND 5 | 9.97 | 0.88 | .6 - .7 |
| BAND 6 | 9.21 | 0.76 | .7 - .8 |
| BAND 7 | 7.72 | 0.57 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.923 | 0.900 | 0.856 |
| BAND 5 | 0.923 | 1.000 | 0.927 | 0.882 |
| BAND 6 | 0.900 | 0.927 | 1.000 | 0.911 |
| BAND 7 | 0.856 | 0.882 | 0.911 | 1.000 |

BAND RATIO PARAMETER -0.127
TRANSFORMED PARAMETER 0.610



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1358-17474
DATE ACQUIRED: 16JUL73

CELLS 2433 TO 2438
LINES 710 TO 719
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

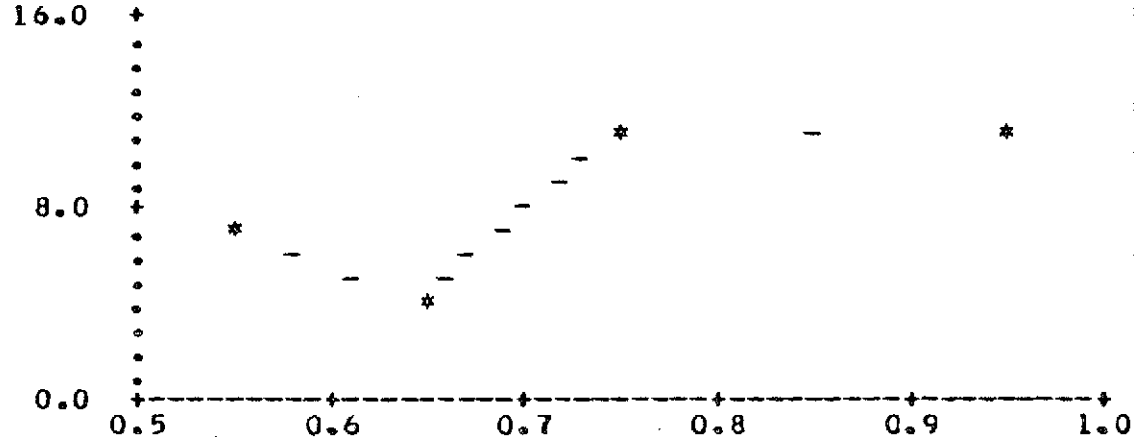
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.92 | 0.55 | .5 - .6 |
| BAND 5 | 4.05 | 0.85 | .6 - .7 |
| BAND 6 | 10.94 | 1.19 | .7 - .8 |
| BAND 7 | 10.91 | 1.49 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.888 | -0.749 | -0.754 |
| BAND 5 | 0.888 | 1.000 | -0.844 | -0.862 |
| BAND 6 | -0.749 | -0.844 | 1.000 | 0.967 |
| BAND 7 | -0.754 | -0.862 | 0.967 | 1.000 |

BAND RATIO PARAMETER 0.458
TRANSFORMED PARAMETER 0.979



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1358-17474
DATE ACQUIRED: 16JUL73

CELLS 2433 TO 2442
LINES 695 TO 708
TOTAL POINTS 140

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

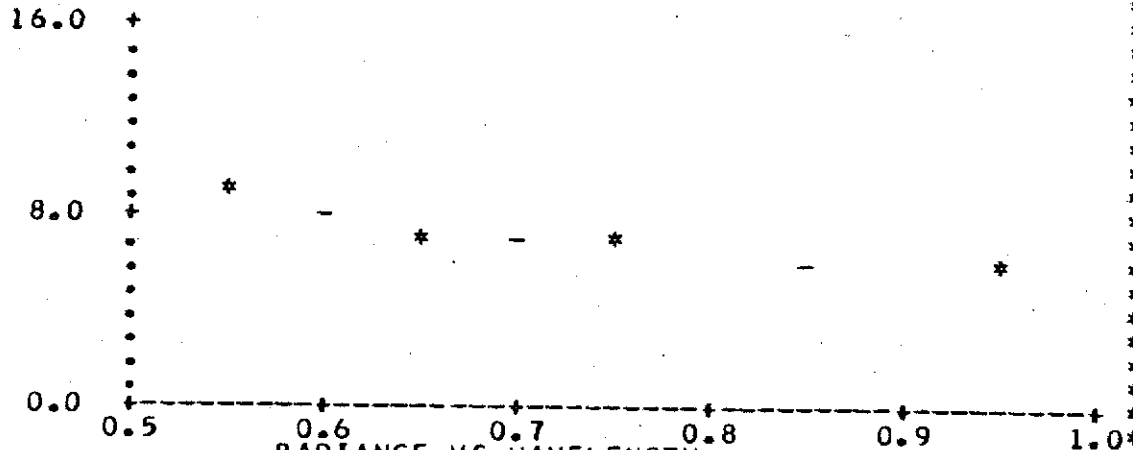
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.78 | 0.82 | .5 - .6 |
| BAND 5 | 7.20 | 1.13 | .6 - .7 |
| BAND 6 | 7.29 | 1.08 | .7 - .8 |
| BAND 7 | 6.16 | 1.38 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.926 | -0.214 | -0.393 |
| BAND 5 | 0.926 | 1.000 | -0.368 | -0.547 |
| BAND 6 | -0.214 | -0.368 | 1.000 | 0.950 |
| BAND 7 | -0.393 | -0.547 | 0.950 | 1.000 |

BAND RATIO PARAMETER -0.077
TRANSFORMED PARAMETER 0.650



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1358-17474
DATE ACQUIRED: 16JUL73

CELLS 2447 TO 2452
LINES 753 TO 763
TOTAL POINTS 66

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

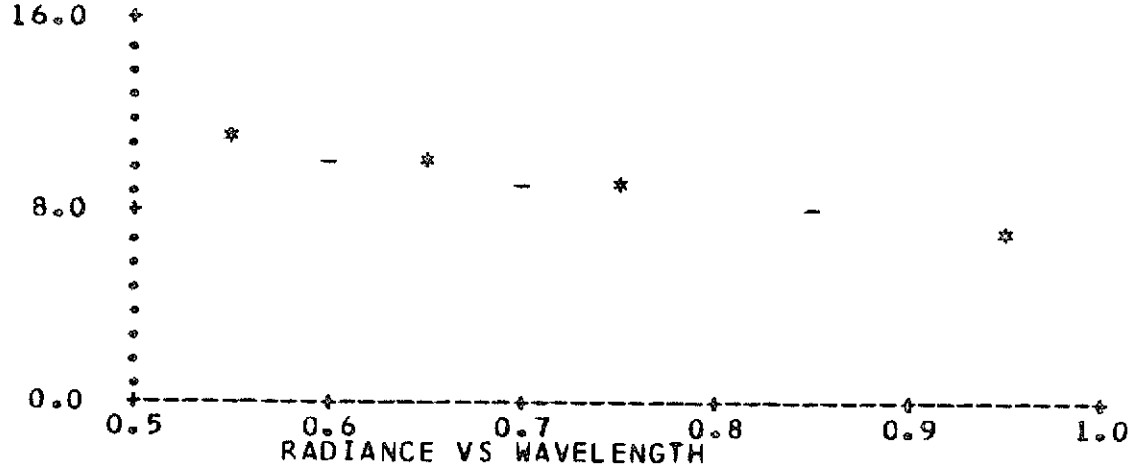
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.95 | 0.91 | .5 - .6 |
| BAND 5 | 9.75 | 0.99 | .6 - .7 |
| BAND 6 | 8.75 | 0.83 | .7 - .8 |
| BAND 7 | 7.07 | 0.62 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.923 | 0.875 | 0.873 |
| BAND 5 | 0.923 | 1.000 | 0.913 | 0.907 |
| BAND 6 | 0.875 | 0.913 | 1.000 | 0.906 |
| BAND 7 | 0.873 | 0.907 | 0.906 | 1.000 |

BAND RATIO PARAMETER -0.159
TRANSFORMED PARAMETER 0.584



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1393-17412
DATE ACQUIRED: 20AUG73

CELLS 417 TO 422
LINES 989 TO 998
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

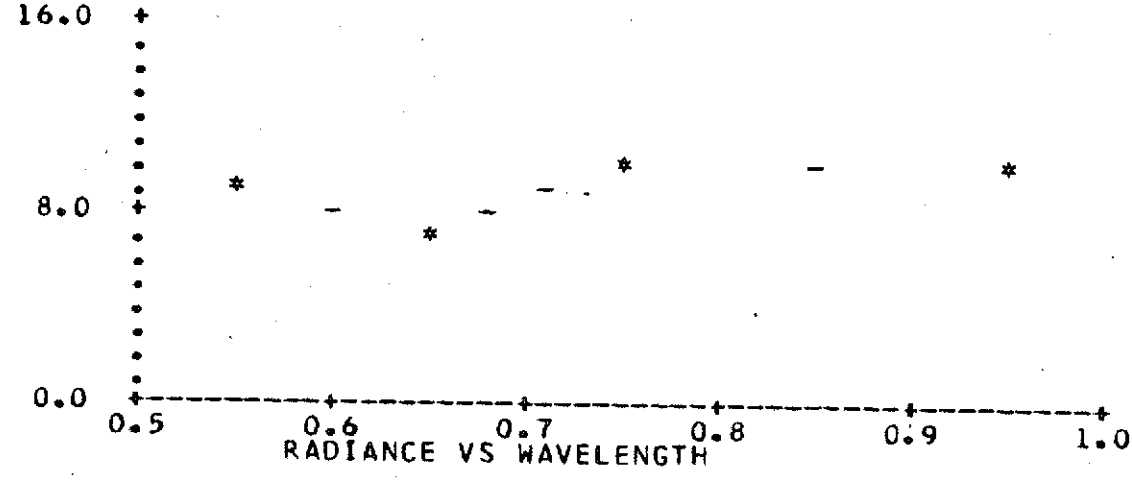
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.21 | 0.48 | .5 - .6 |
| BAND 5 | 7.13 | 0.63 | .6 - .7 |
| BAND 6 | 10.04 | 0.72 | .7 - .8 |
| BAND 7 | 9.79 | 0.76 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.834 | 0.327 | 0.424 |
| BAND 5 | 0.834 | 1.000 | 0.202 | 0.300 |
| BAND 6 | 0.327 | 0.202 | 1.000 | 0.887 |
| BAND 7 | 0.424 | 0.300 | 0.887 | 1.000 |

BAND RATIO PARAMETER 0.157
TRANSFORMED PARAMETER 0.810



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1393-17412
DATE ACQUIRED: 20AUG73

CELLS 417 TO 426
LINES 975 TO 984
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

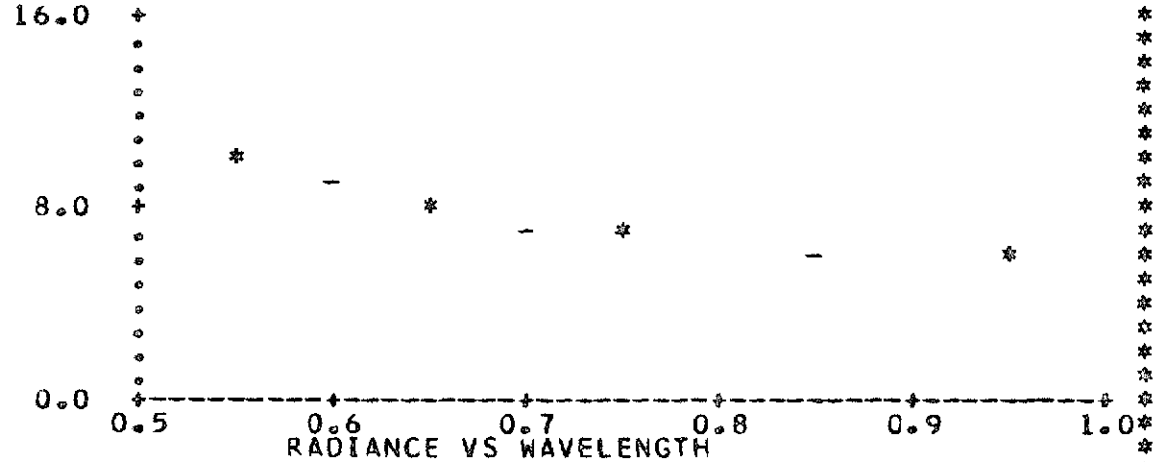
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.58 | 0.67 | .5 - .6 |
| BAND 5 | 8.16 | 0.77 | .6 - .7 |
| BAND 6 | 7.30 | 0.70 | .7 - .8 |
| BAND 7 | 6.11 | 0.63 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.858 | 0.684 | 0.509 |
| BAND 5 | 0.858 | 1.000 | 0.783 | 0.607 |
| BAND 6 | 0.684 | 0.783 | 1.000 | 0.839 |
| BAND 7 | 0.509 | 0.607 | 0.839 | 1.000 |

BAND RATIO PARAMETER -0.144
TRANSFORMED PARAMETER 0.596



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1393-17412
DATE ACQUIRED: 20AUG73

CELLS 433 TO 436
LINES 1034 TO 1042
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

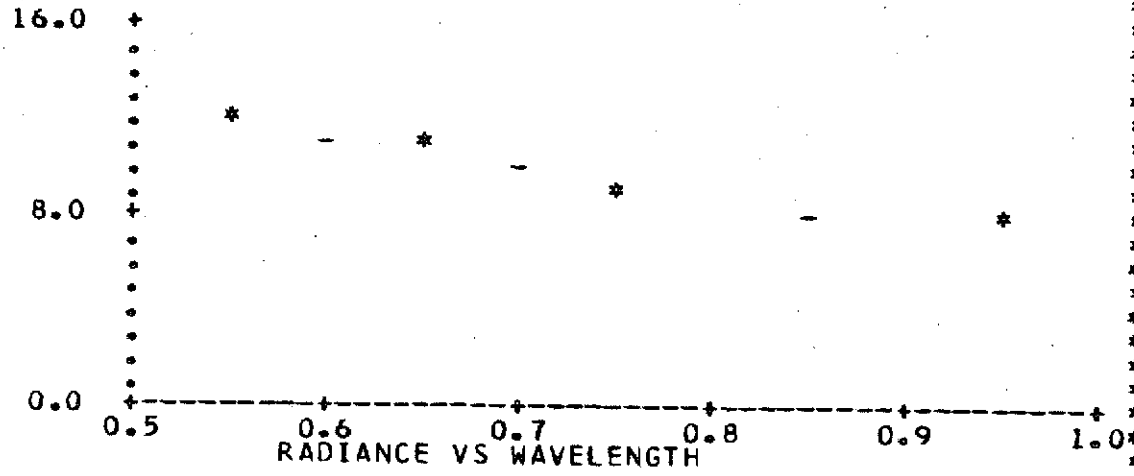
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.59 | 1.07 | .5 - .6 |
| BAND 5 | 10.54 | 1.08 | .6 - .7 |
| BAND 6 | 9.20 | 0.83 | .7 - .8 |
| BAND 7 | 7.65 | 0.77 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.917 | 0.873 | 0.819 |
| BAND 5 | 0.917 | 1.000 | 0.908 | 0.852 |
| BAND 6 | 0.873 | 0.908 | 1.000 | 0.957 |
| BAND 7 | 0.819 | 0.852 | 0.957 | 1.000 |

BAND RATIO PARAMETER -0.159
TRANSFORMED PARAMETER 0.584



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20NOV73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1411-17410
DATE ACQUIRED: 07SEP73

CELLS 377 TO 382
LINES 1026 TO 1034
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

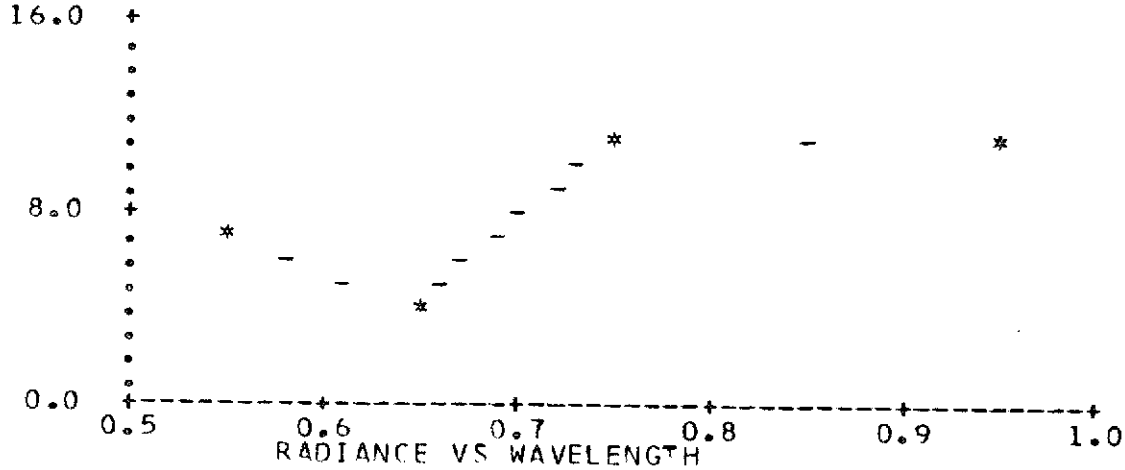
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.17 | 1.03 | .5 - .6 |
| BAND 5 | 4.29 | 1.46 | .6 - .7 |
| BAND 6 | 11.06 | 0.51 | .7 - .8 |
| BAND 7 | 11.21 | 0.95 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.960 | -0.608 | -0.800 |
| BAND 5 | 0.960 | 1.000 | -0.624 | -0.847 |
| BAND 6 | -0.608 | -0.624 | 1.000 | 0.790 |
| BAND 7 | -0.800 | -0.847 | 0.790 | 1.000 |

BAND RATIO PARAMETER 0.446
TRANSFORMED PARAMETER 0.973



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1411-17410
DATE ACQUIRED: 07SEP73

CELLS 395 TO 400
LINES 1070 TO 1078
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

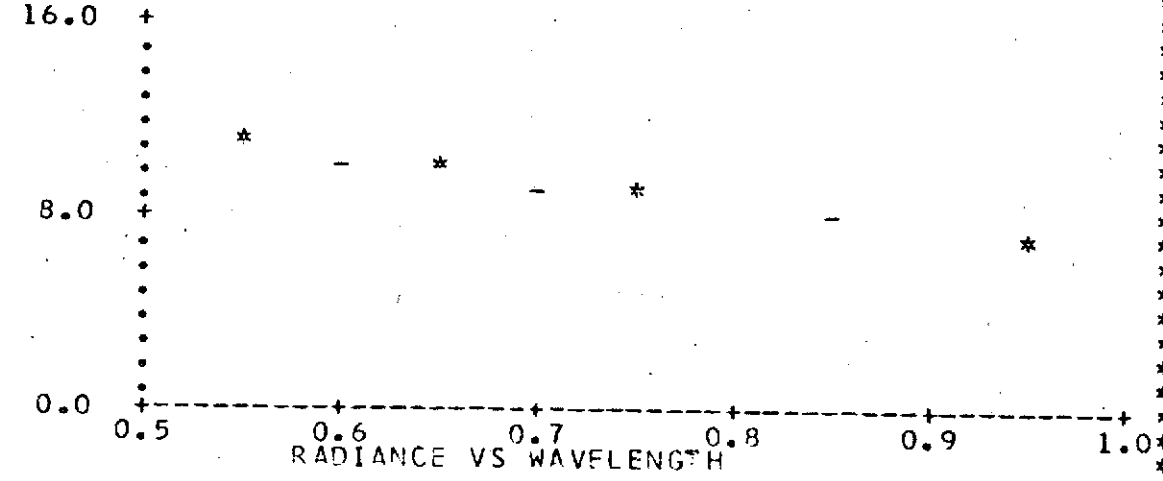
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.24 | 1.23 | .5 - .6 |
| BAND 5 | 9.89 | 1.48 | .6 - .7 |
| BAND 6 | 8.89 | 1.16 | .7 - .8 |
| BAND 7 | 7.23 | 0.94 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.949 | 0.906 | 0.865 |
| BAND 5 | 0.949 | 1.000 | 0.931 | 0.905 |
| BAND 6 | 0.906 | 0.931 | 1.000 | 0.952 |
| BAND 7 | 0.865 | 0.905 | 0.952 | 1.000 |

BAND RATIO PARAMETER -0.155
TRANSFORMED PARAMETER 0.587



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1411-17410
DATE ACQUIRED: 07SEP73

CELLS 375 TO 384
LINES 1011 TO 1020
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

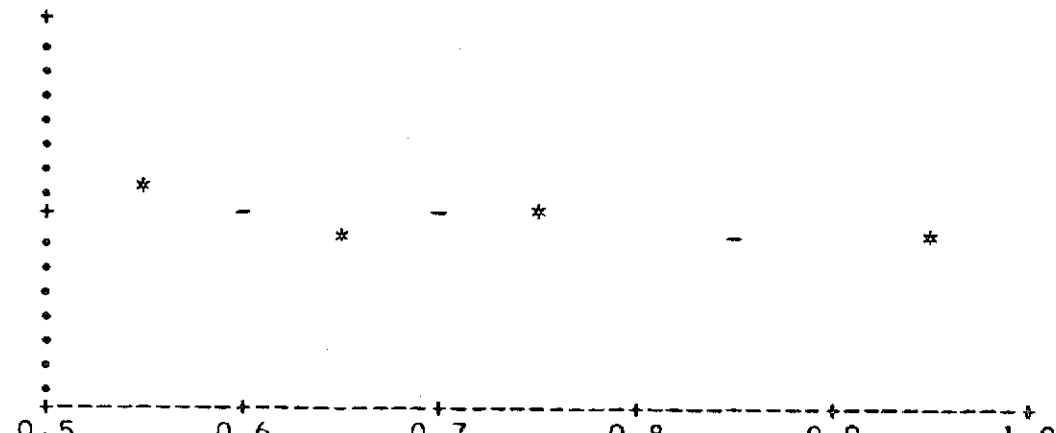
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.91 | 1.24 | .5 - .6 |
| BAND 5 | 6.85 | 1.65 | .6 - .7 |
| BAND 6 | 8.00 | 1.65 | .7 - .8 |
| BAND 7 | 7.11 | 2.19 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.950 | -0.546 | -0.694 |
| BAND 5 | 0.950 | 1.000 | -0.597 | -0.737 |
| BAND 6 | -0.546 | -0.597 | 1.000 | 0.962 |
| BAND 7 | -0.694 | -0.737 | 0.962 | 1.000 |

BAND RATIO PARAMETER 0.019
TRANSFORMED PARAMETER 0.720




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 A
IMAGE IDENTIFIER: 1466-17453
DATE ACQUIRED: 01NOV73

CELLS 2187 TO 2194
LINES 751 TO 760
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

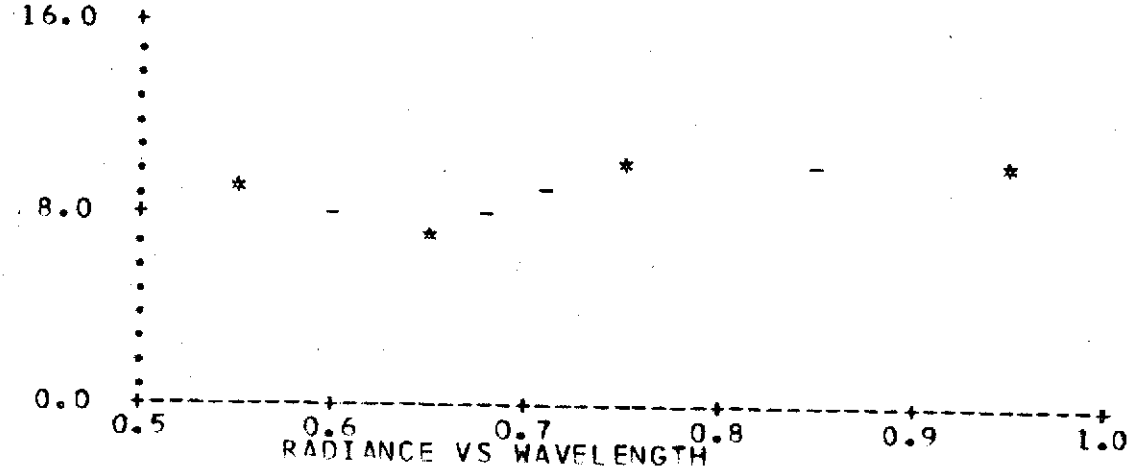
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.90 | 0.66 | .5 - .6 |
| BAND 5 | 6.98 | 0.82 | .6 - .7 |
| BAND 6 | 9.74 | 0.97 | .7 - .8 |
| BAND 7 | 9.66 | 1.17 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.785 | -0.115 | -0.347 |
| BAND 5 | 0.785 | 1.000 | -0.121 | -0.373 |
| BAND 6 | -0.115 | -0.121 | 1.000 | 0.865 |
| BAND 7 | -0.347 | -0.373 | 0.865 | 1.000 |

BAND RATIO PARAMETER 0.151
TRANSFORMED PARAMETER 0.813




PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 R
IMAGE IDENTIFIER: 1466-17453
DATE ACQUIRED: 01NOV73

CELLS 2187 TO 2196
LINES 737 TO 746
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

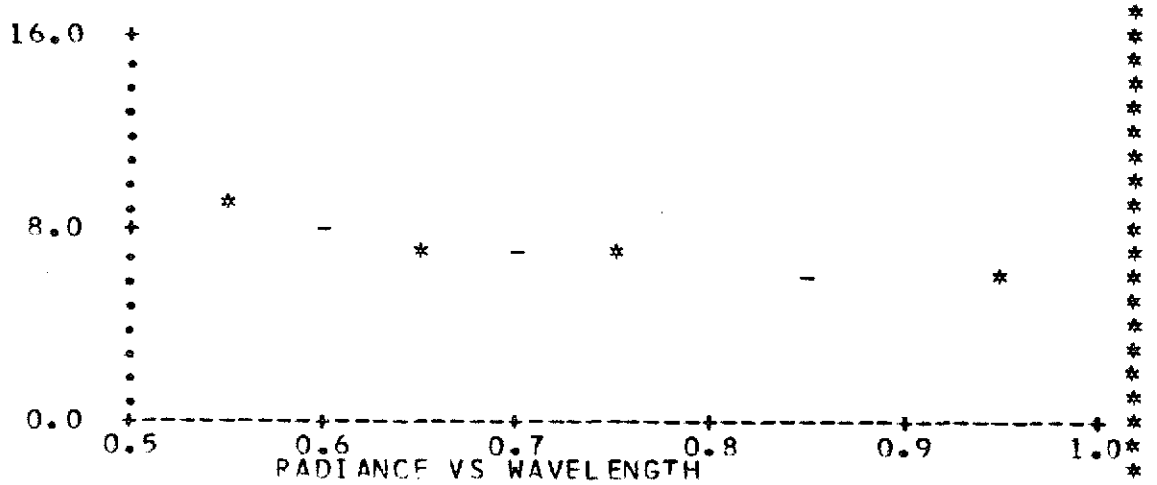
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.79 | 0.71 | .5 - .6 |
| BAND 5 | 6.72 | 0.75 | .6 - .7 |
| BAND 6 | 6.91 | 0.98 | .7 - .8 |
| BAND 7 | 6.28 | 0.94 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.737 | 0.715 | 0.626 |
| BAND 5 | 0.737 | 1.000 | 0.815 | 0.776 |
| BAND 6 | 0.715 | 0.815 | 1.000 | 0.896 |
| BAND 7 | 0.626 | 0.776 | 0.896 | 1.000 |

BAND RATIO PARAMETER -0.034
TRANSFORMED PARAMETER 0.683




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 4 W
IMAGE IDENTIFIER: 1466-17453
DATE ACQUIRED: 01NOV73

CELLS 2205 TO 2208
LINES 795 TO 804
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

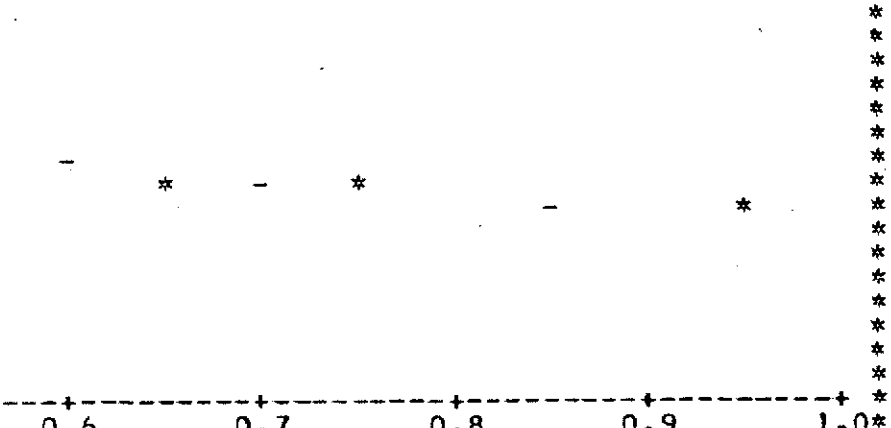
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.71 | 1.09 | .5 - .6 |
| BAND 5 | 8.61 | 1.17 | .6 - .7 |
| BAND 6 | 8.67 | 0.91 | .7 - .8 |
| BAND 7 | 7.69 | 0.81 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.917 | 0.822 | 0.736 |
| BAND 5 | 0.917 | 1.000 | 0.818 | 0.732 |
| BAND 6 | 0.822 | 0.818 | 1.000 | 0.858 |
| BAND 7 | 0.736 | 0.732 | 0.858 | 1.000 |

BAND RATIO PARAMETER -0.056
TRANSFORMED PARAMETER 0.666



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 10JAN74

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1015-17422
DATE ACQUIRED: 07AUG72

CELLS 1913 TO 1922
LINES 1607 TO 1644
TOTAL POINTS 380

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

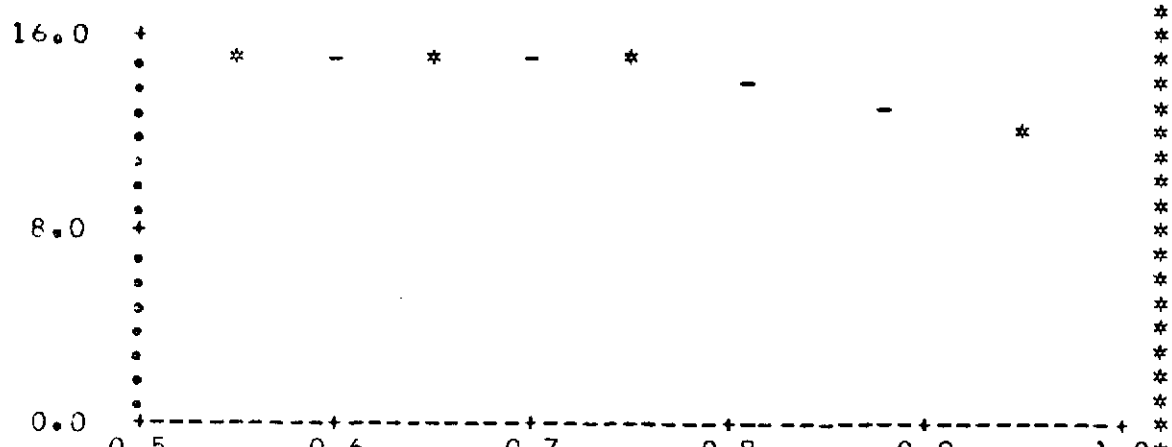
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 15.41 | 4.66 | .5 - .6 |
| BAND 5 | 15.23 | 5.61 | .6 - .7 |
| BAND 6 | 14.70 | 2.35 | .7 - .8 |
| BAND 7 | 12.48 | 1.40 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.991 | 0.887 | 0.264 |
| BAND 5 | 0.991 | 1.000 | 0.864 | 0.210 |
| BAND 6 | 0.887 | 0.864 | 1.000 | 0.640 |
| BAND 7 | 0.264 | 0.210 | 0.640 | 1.000 |

BAND RATIO PARAMETER -0.099
TRANSFORMED PARAMETER 0.633




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1015-17422
DATE ACQUIRED: 07AUG72

CELLS 1860 TO 1880
LINES 1571 TO 1584
TOTAL POINTS 308

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

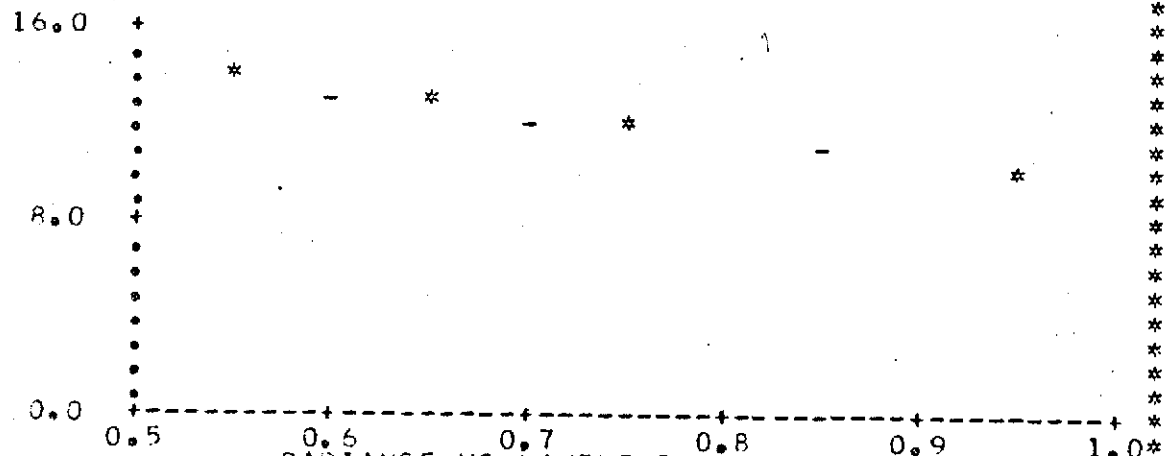
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.66 | 1.54 | .5 - .6 |
| BAND 5 | 12.93 | 1.72 | .6 - .7 |
| BAND 6 | 11.64 | 1.09 | .7 - .8 |
| BAND 7 | 9.67 | 0.89 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.956 | 0.746 | 0.440 |
| BAND 5 | 0.956 | 1.000 | 0.720 | 0.391 |
| BAND 6 | 0.746 | 0.720 | 1.000 | 0.857 |
| BAND 7 | 0.440 | 0.391 | 0.857 | 1.000 |

BAND RATIO PARAMETER -0.144
TRANSFORMED PARAMETER 0.597



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2 CELLS 1993 TO 2006
IMAGE IDENTIFIER: 1015-17422 LINES 1557 TO 1570
DATE ACQUIRED: 07AUG72 TOTAL POINTS 196

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

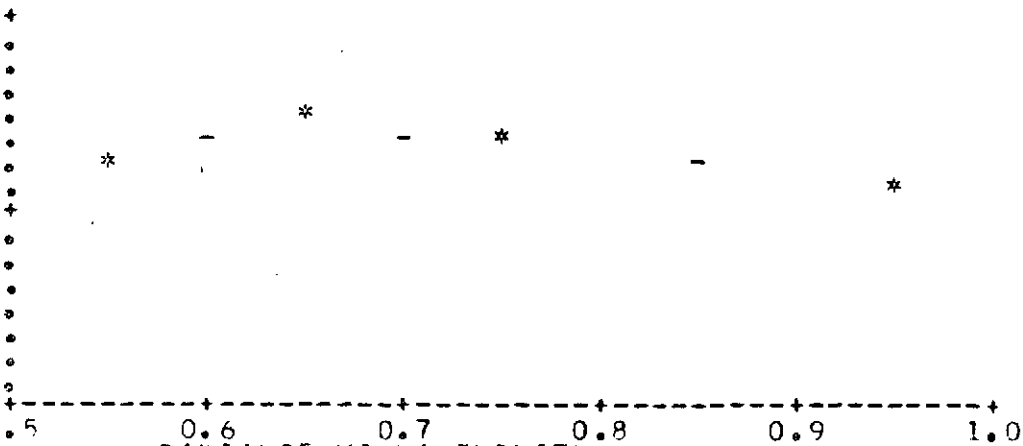
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.09 | 0.94 | .5 - .6 |
| BAND 5 | 12.01 | 1.03 | .6 - .7 |
| BAND 6 | 11.07 | 1.07 | .7 - .8 |
| BAND 7 | 9.35 | 0.99 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.860 | 0.886 | 0.899 |
| BAND 5 | 0.860 | 1.000 | 0.923 | 0.911 |
| BAND 6 | 0.886 | 0.923 | 1.000 | 0.945 |
| BAND 7 | 0.899 | 0.911 | 0.945 | 1.000 |

BAND RATIO PARAMETER -0.125
TRANSFORMED PARAMETER 0.613



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1015-17422
DATE ACQUIRED: 07AUG72

CELLS 1978 TO 1984
LINES 1579 TO 1584
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

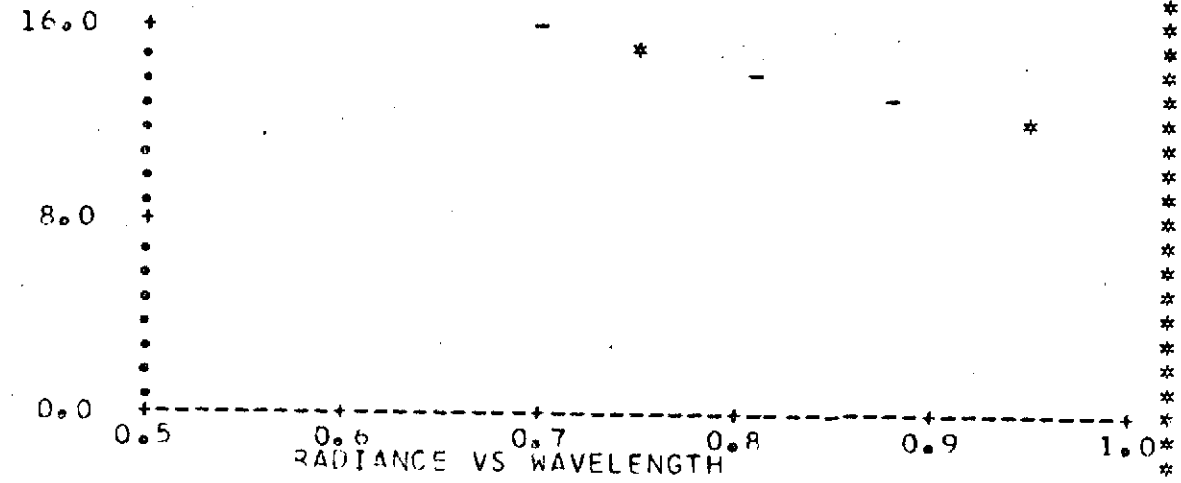
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 16.59 | 1.42 | .5 - .6 |
| BAND 5 | 17.03 | 1.24 | .6 - .7 |
| BAND 6 | 14.92 | 0.95 | .7 - .8 |
| BAND 7 | 11.94 | 0.77 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.898 | 0.889 | 0.843 |
| BAND 5 | 0.898 | 1.000 | 0.933 | 0.947 |
| BAND 6 | 0.889 | 0.933 | 1.000 | 0.915 |
| BAND 7 | 0.843 | 0.947 | 0.915 | 1.000 |

BAND RATIO PARAMETER -0.176
TRANSFORMED PARAMETER 0.570




PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1033-17423
DATE ACQUIRED: 25AUG72

CELLS 1881 TO 1889
LINES 923 TO 930
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

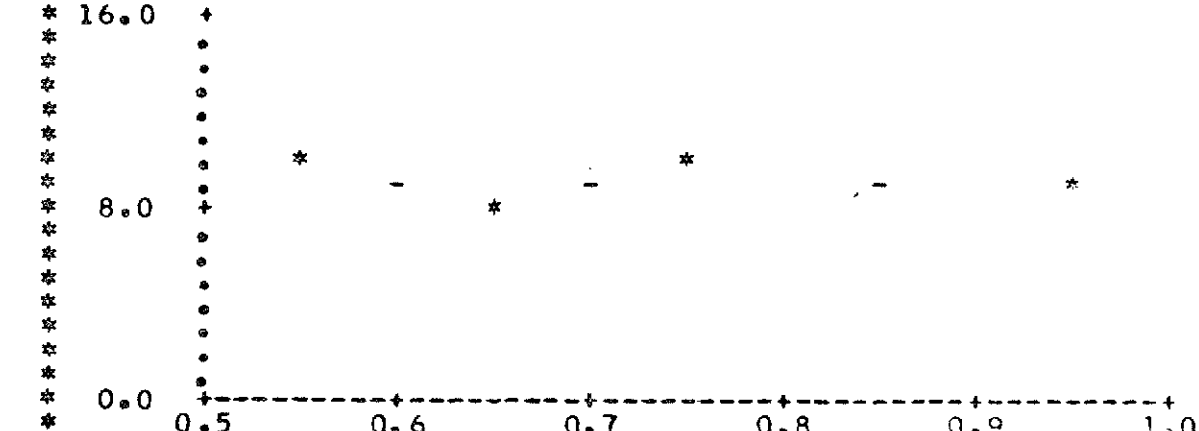
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.22 | 0.67 | .5 - .6 |
| BAND 5 | 7.69 | 0.77 | .6 - .7 |
| BAND 6 | 10.15 | 0.83 | .7 - .8 |
| BAND 7 | 9.25 | 0.93 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.851 | 0.349 | 0.151 |
| BAND 5 | 0.851 | 1.000 | 0.128 | -0.122 |
| BAND 6 | 0.349 | 0.128 | 1.000 | 0.850 |
| BAND 7 | 0.151 | -0.122 | 0.850 | 1.000 |

BAND RATIO PARAMETER 0.092
TRANSFORMED PARAMETER 0.769




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 18JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1033-17423
DATE ACQUIRED: 25AUG72

CELLS 1955 TO 1969
LINES 877 TO 882
TOTAL POINTS 96

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

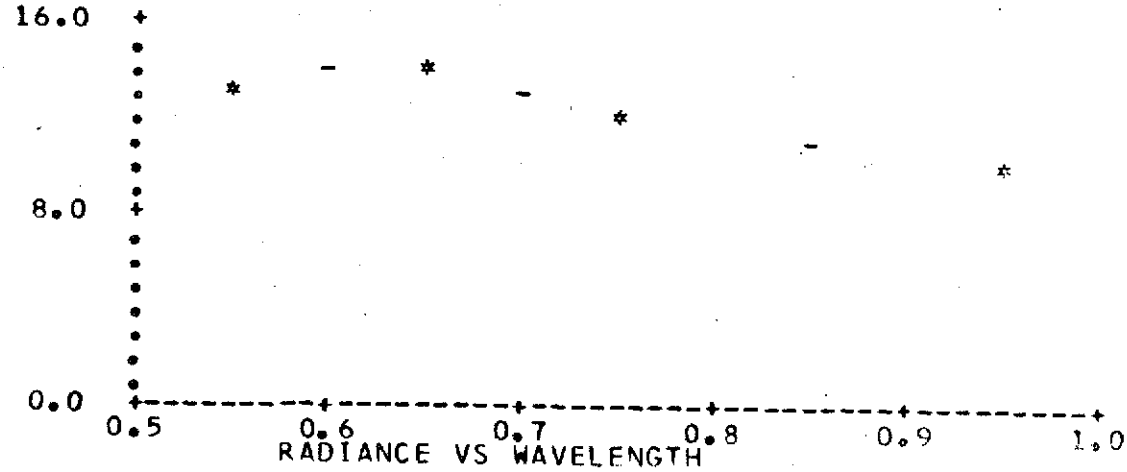
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.37 | 0.60 | .5 - .6 |
| BAND 5 | 13.76 | 0.69 | .6 - .7 |
| BAND 6 | 12.01 | 0.60 | .7 - .8 |
| BAND 7 | 9.63 | 0.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.695 | 0.621 | 0.683 |
| BAND 5 | 0.695 | 1.000 | 0.725 | 0.730 |
| BAND 6 | 0.621 | 0.725 | 1.000 | 0.748 |
| BAND 7 | 0.683 | 0.730 | 0.748 | 1.000 |

BAND RATIO PARAMETER -0.177
TRANSFORMED PARAMETER 0.568




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 18JUL73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1033-17423
DATE ACQUIRED: 25AUG72

CELLS 1826 TO 1844
LINES 889 TO 902
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

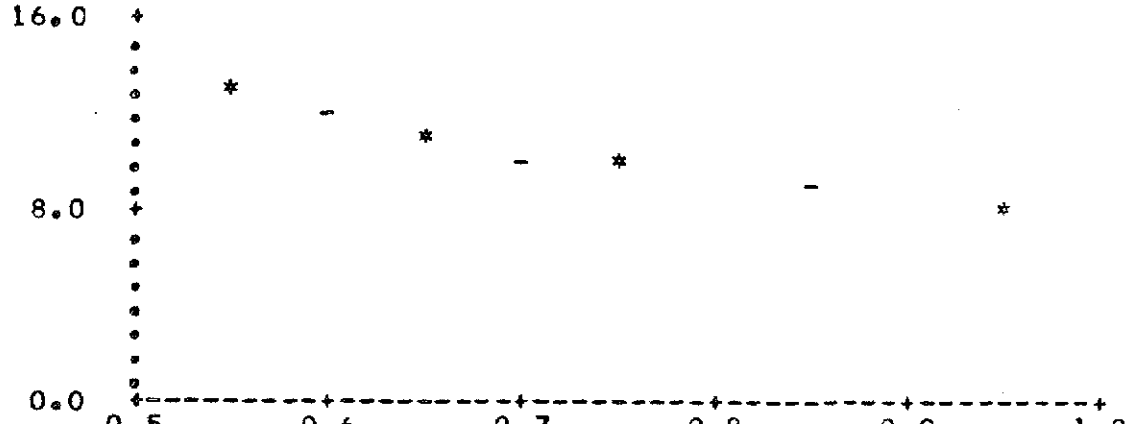
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.02 | 1.19 | .5 - .6 |
| BAND 5 | 11.44 | 1.18 | .6 - .7 |
| BAND 6 | 9.67 | 0.97 | .7 - .8 |
| BAND 7 | 7.57 | 0.84 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.914 | 0.852 | 0.746 |
| BAND 5 | 0.914 | 1.000 | 0.824 | 0.691 |
| BAND 6 | 0.852 | 0.824 | 1.000 | 0.914 |
| BAND 7 | 0.746 | 0.691 | 0.914 | 1.000 |

BAND RATIO PARAMETER -0.204
TRANSFORMED PARAMETER 0.545




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 18JUL73



C - 4

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1033-17423
DATE ACQUIRED: 25AUG72

CELLS 1945 TO 1951
LINES 895 TO 900
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

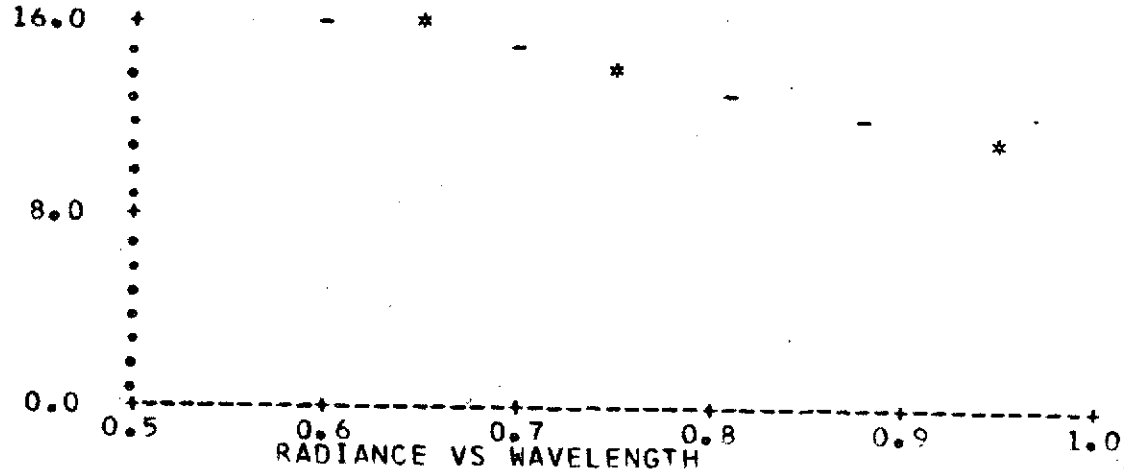
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 16.73 | 1.32 | .5 - .6 |
| BAND 5 | 16.07 | 1.48 | .6 - .7 |
| BAND 6 | 13.56 | 1.24 | .7 - .8 |
| BAND 7 | 10.67 | 0.94 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.930 | 0.887 | 0.901 |
| BAND 5 | 0.930 | 1.000 | 0.941 | 0.954 |
| BAND 6 | 0.887 | 0.941 | 1.000 | 0.949 |
| BAND 7 | 0.901 | 0.954 | 0.949 | 1.000 |

BAND RATIO PARAMETER -0.202
TRANSFORMED PARAMETER 0.546




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 18JUL73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1051-17423
DATE ACQUIRED: 12SEP72

CELLS 1841 TO 1848
LINES 1236 TO 1240
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

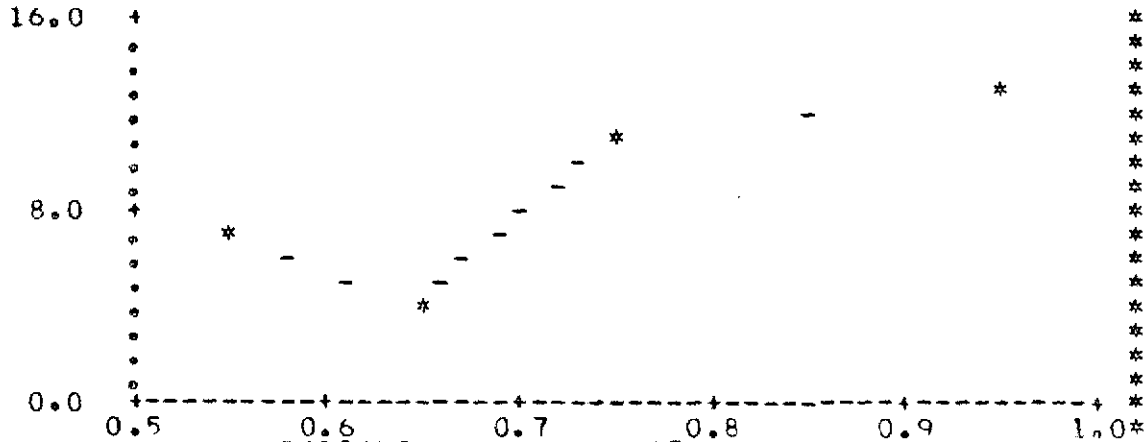
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.91 | 0.73 | .5 - .6 |
| BAND 5 | 4.05 | 0.97 | .6 - .7 |
| BAND 6 | 11.19 | 1.08 | .7 - .8 |
| BAND 7 | 12.58 | 1.64 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.927 | -0.779 | -0.829 |
| BAND 5 | 0.927 | 1.000 | -0.868 | -0.942 |
| BAND 6 | -0.779 | -0.868 | 1.000 | 0.894 |
| BAND 7 | -0.829 | -0.942 | 0.894 | 1.000 |

BAND RATIO PARAMETER 0.513
TRANSFORMED PARAMETER 1.006



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R
IMAGE IDENTIFIER: 1051-17423
DATE ACQUIRED: 12SEP72

CELLS 1787 TO 1806
LINES 1201 TO 1214
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

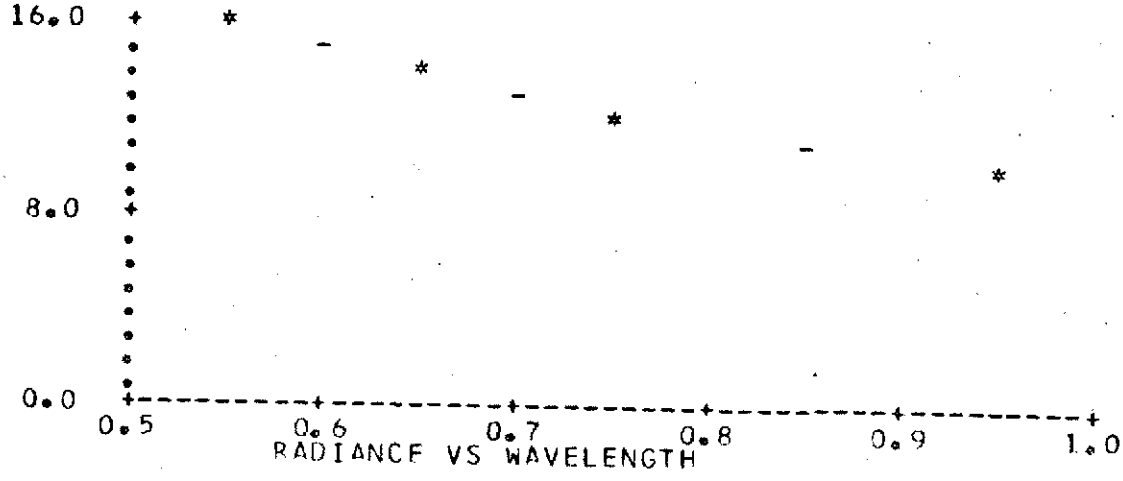
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 15.89 | 1.58 | .5 - .6 |
| BAND 5 | 14.39 | 1.47 | .6 - .7 |
| BAND 6 | 12.26 | 1.28 | .7 - .8 |
| BAND 7 | 10.05 | 0.96 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.940 | 0.898 | 0.884 |
| BAND 5 | 0.940 | 1.000 | 0.896 | 0.872 |
| BAND 6 | 0.898 | 0.896 | 1.000 | 0.925 |
| BAND 7 | 0.884 | 0.872 | 0.925 | 1.000 |

BAND RATIO PARAMETER -0.178
TRANSFORMED PARAMETER 0.568




PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1051-17423
DATE ACQUIRED: 12SEP72

CELLS 1905 TO 1914
LINES 1206 TO 1211
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

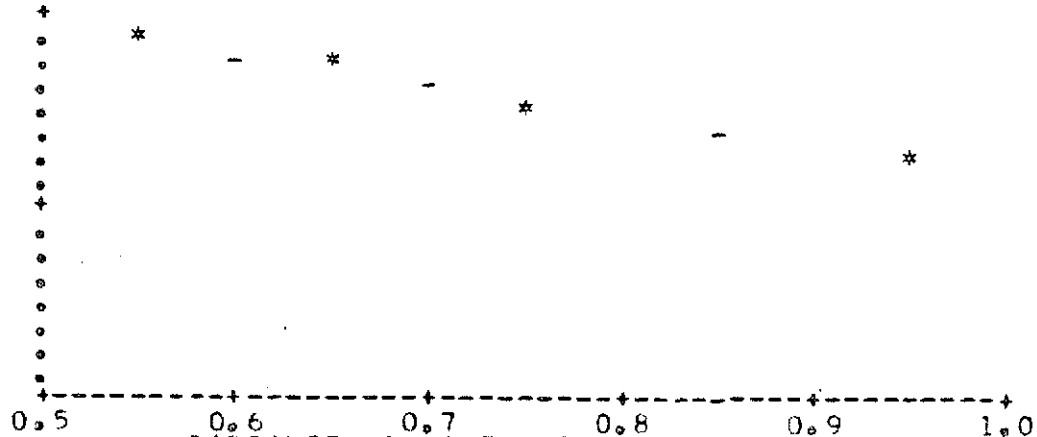
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.63 | 1.41 | .5 - .6 |
| BAND 5 | 13.91 | 1.34 | .6 - .7 |
| BAND 6 | 11.76 | 1.09 | .7 - .8 |
| BAND 7 | 9.62 | 0.79 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.923 | 0.884 | 0.891 |
| BAND 5 | 0.923 | 1.000 | 0.913 | 0.932 |
| BAND 6 | 0.884 | 0.913 | 1.000 | 0.950 |
| BAND 7 | 0.891 | 0.932 | 0.950 | 1.000 |

BAND RATIO PARAMETER -0.182
TRANSFORMED PARAMETER 0.564




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1069-17423
DATE ACQUIRED: 30SEP72

CELLS 1815 TO 1820
LINES 1332 TO 1338
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

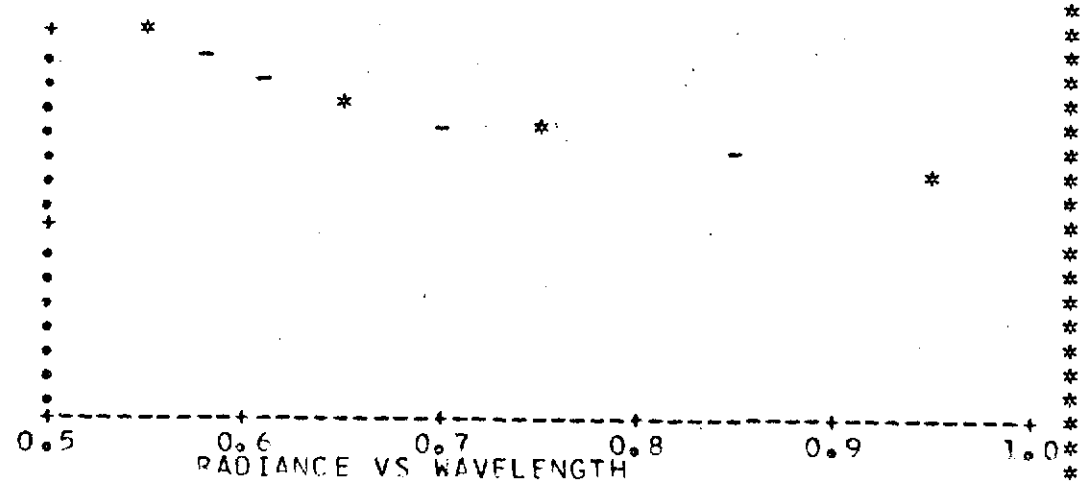
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 16.09 | 0.72 | .5 - .6 |
| BAND 5 | 12.59 | 0.98 | .6 - .7 |
| BAND 6 | 11.99 | 0.59 | .7 - .8 |
| BAND 7 | 10.28 | 0.30 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.772 | 0.351 | 0.013 |
| BAND 5 | 0.772 | 1.000 | 0.277 | -0.005 |
| BAND 6 | 0.351 | 0.277 | 1.000 | 0.522 |
| BAND 7 | 0.013 | -0.005 | 0.522 | 1.000 |

BAND RATIO PARAMETER -0.101
TRANSFORMED PARAMETER 0.632




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 19JUL73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1069-17423
DATE ACQUIRED: 30SEP72

CELLS 1887 TO 1902
LINES 1297 TO 1310
TOTAL POINTS 224

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

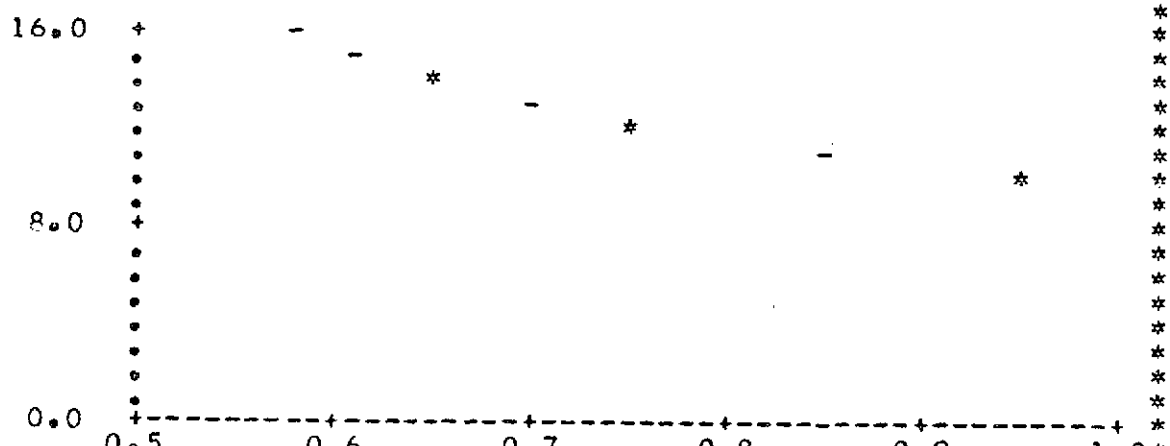
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 16.51 | 1.25 | .5 - .6 |
| BAND 5 | 14.13 | 1.38 | .6 - .7 |
| BAND 6 | 11.82 | 1.11 | .7 - .8 |
| BAND 7 | 9.62 | 0.92 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.851 | 0.779 | 0.798 |
| BAND 5 | 0.851 | 1.000 | 0.900 | 0.926 |
| BAND 6 | 0.779 | 0.900 | 1.000 | 0.922 |
| BAND 7 | 0.798 | 0.926 | 0.922 | 1.000 |

BAND RATIO PARAMETER -0.190
TRANSFORMED PARAMETER 0.557



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 19JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1069-17423
DATE ACQUIRED: 30SEP72

CELLS 1759 TO 1778
LINES 1284 TO 1291
TOTAL POINTS 160

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

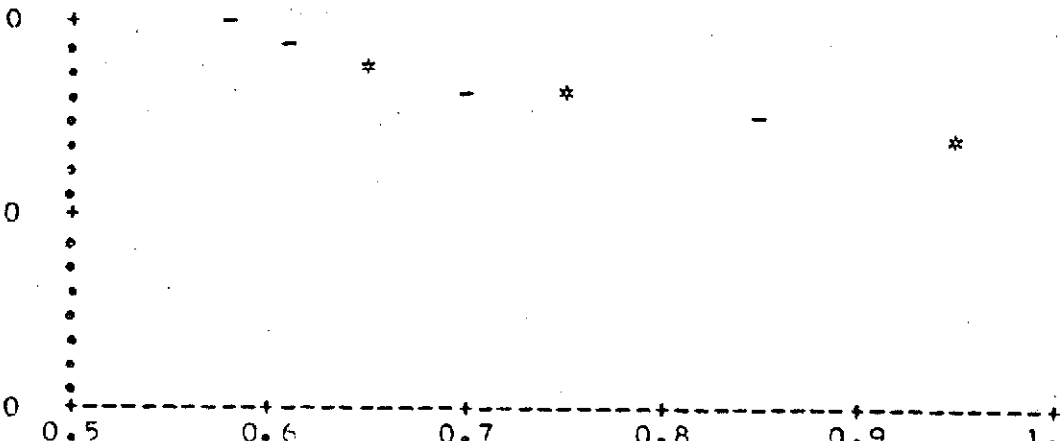
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 17.45 | 1.41 | .5 - .6 |
| BAND 5 | 13.95 | 1.63 | .6 - .7 |
| BAND 6 | 12.85 | 0.81 | .7 - .8 |
| BAND 7 | 10.79 | 1.01 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.917 | 0.148 | -0.386 |
| BAND 5 | 0.917 | 1.000 | 0.142 | -0.460 |
| BAND 6 | 0.148 | 0.142 | 1.000 | 0.643 |
| BAND 7 | -0.386 | -0.460 | 0.643 | 1.000 |

BAND RATIO PARAMETER -0.128
TRANSFORMED PARAMETER 0.610




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 19JUL73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1069-17423
DATE ACQUIRED: 30SEP72

CELLS 1877 TO 1884
LINES 1302 TO 1308
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

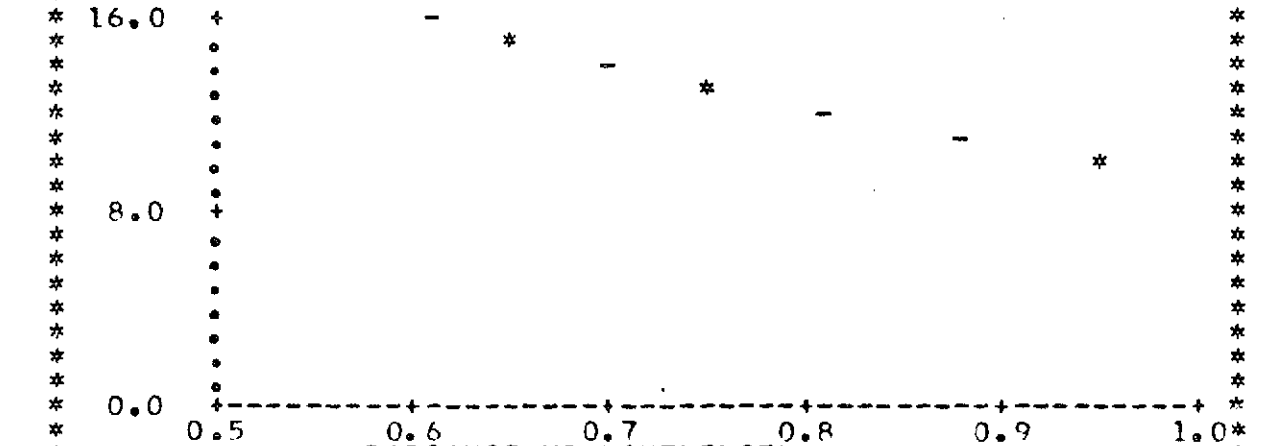
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 18.29 | 0.74 | .5 - .6 |
| BAND 5 | 15.23 | 0.80 | .6 - .7 |
| BAND 6 | 12.81 | 0.54 | .7 - .8 |
| BAND 7 | 10.19 | 0.41 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.723 | 0.578 | 0.727 |
| BAND 5 | 0.723 | 1.000 | 0.592 | 0.758 |
| BAND 6 | 0.578 | 0.592 | 1.000 | 0.686 |
| BAND 7 | 0.727 | 0.758 | 0.686 | 1.000 |

BAND RATIO PARAMETER -0.198
TRANSFORMED PARAMETER 0.549




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 19JUL73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1266-17375
DATE ACQUIRED: 15APR73

CELLS 199 TO 206
LINES 1675 TO 1682
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

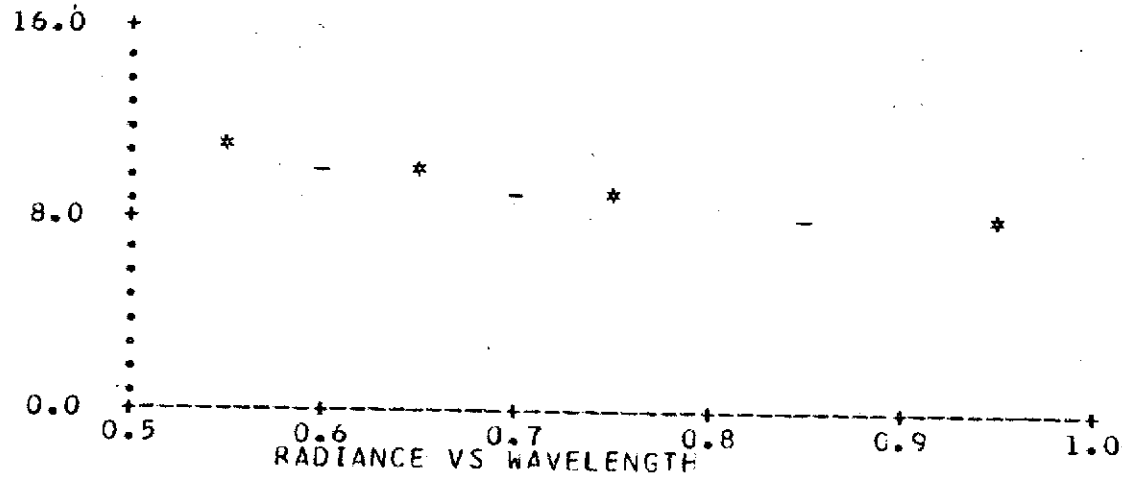
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.78 | 0.55 | .5 - .6 |
| BAND 5 | 9.74 | 0.73 | .6 - .7 |
| BAND 6 | 9.04 | 0.43 | .7 - .8 |
| BAND 7 | 7.81 | 0.47 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.705 | 0.273 | -0.041 |
| BAND 5 | 0.705 | 1.000 | 0.271 | -0.214 |
| BAND 6 | 0.273 | 0.271 | 1.000 | 0.633 |
| BAND 7 | -0.041 | -0.214 | 0.633 | 1.000 |

BAND RATIO PARAMETER -0.110
TRANSFORMED PARAMETER 0.624




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1 CELLS 273 TO 288
IMAGE IDENTIFIER: 1266-17375 LINES 1628 TO 1635
DATE ACQUIRED: 15APR73 TOTAL POINTS 128

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

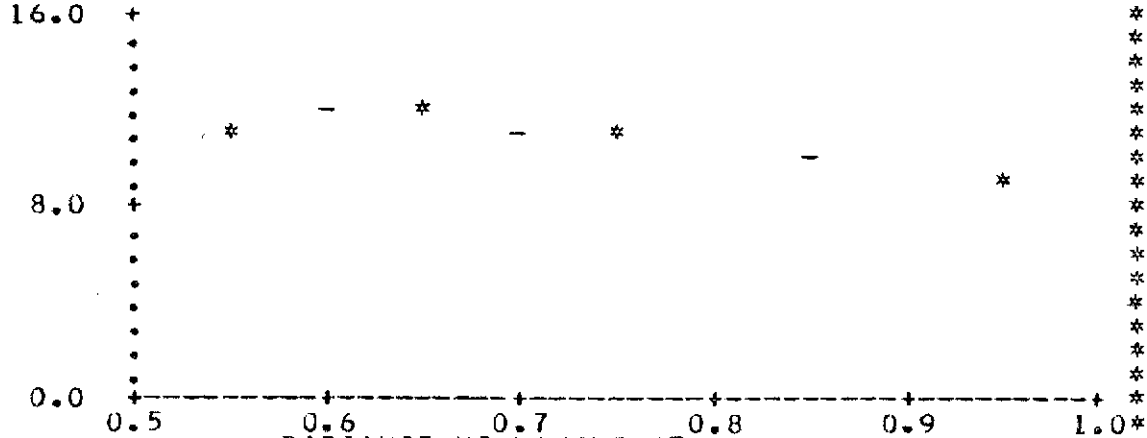
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.16 | 0.50 | .5 - .6 |
| BAND 5 | 12.20 | 0.89 | .6 - .7 |
| BAND 6 | 11.27 | 0.47 | .7 - .8 |
| BAND 7 | 9.49 | 0.40 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.643 | 0.571 | 0.485 |
| BAND 5 | 0.643 | 1.000 | 0.637 | 0.362 |
| BAND 6 | 0.571 | 0.637 | 1.000 | 0.691 |
| BAND 7 | 0.485 | 0.362 | 0.691 | 1.000 |

BAND RATIO PARAMETER -0.125
TRANSFORMED PARAMETER 0.613



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1266-17375
DATE ACQUIRED: 15APR73

CELLS 145 TO 162
LINES 1642 TO 1655
TOTAL POINTS 252

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

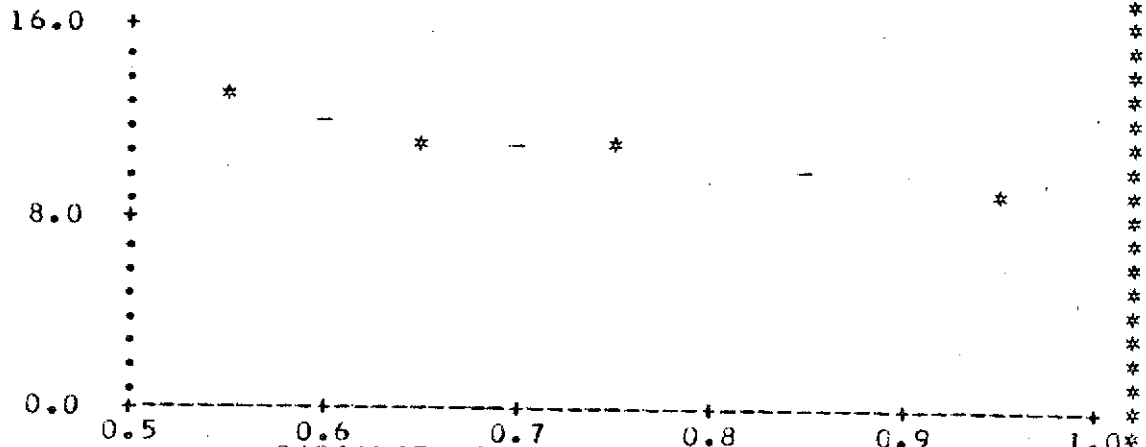
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.73 | 1.45 | .5 - .6 |
| BAND 5 | 11.31 | 1.55 | .6 - .7 |
| BAND 6 | 10.73 | 1.14 | .7 - .8 |
| BAND 7 | 9.08 | 0.95 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.908 | 0.866 | 0.778 |
| BAND 5 | 0.908 | 1.000 | 0.847 | 0.743 |
| BAND 6 | 0.866 | 0.847 | 1.000 | 0.924 |
| BAND 7 | 0.778 | 0.743 | 0.924 | 1.000 |

BAND RATIO PARAMETER -0.110
TRANSFORMED PARAMETER 0.625



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22OCT73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1266-17375
DATE ACQUIRED: 15APR73

CELLS 263 TO 268
LINES 1646 TO 1652
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

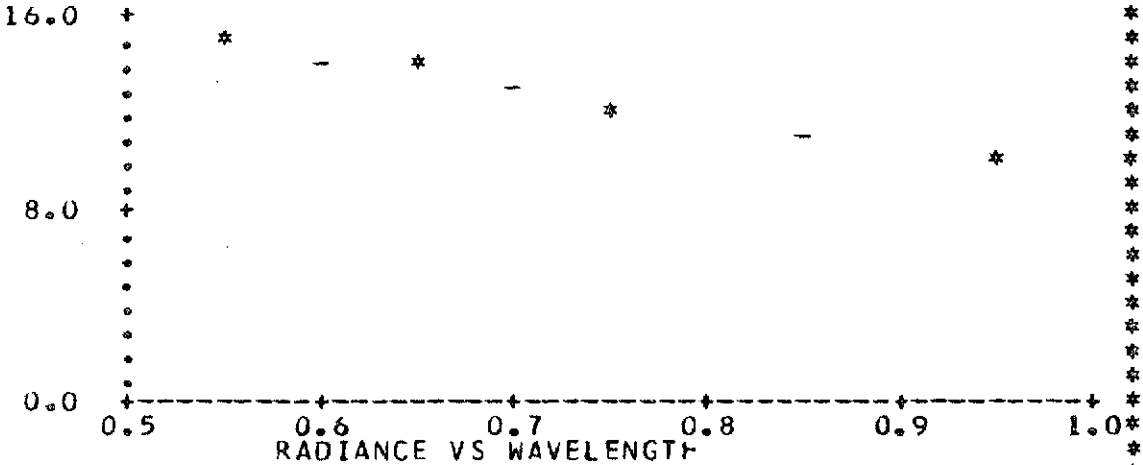
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.73 | 2.36 | .5 - .6 |
| BAND 5 | 13.97 | 2.90 | .6 - .7 |
| BAND 6 | 12.11 | 2.13 | .7 - .8 |
| BAND 7 | 9.72 | 1.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.958 | 0.976 | 0.954 |
| BAND 5 | 0.958 | 1.000 | 0.963 | 0.958 |
| BAND 6 | 0.976 | 0.963 | 1.000 | 0.981 |
| BAND 7 | 0.954 | 0.958 | 0.981 | 1.000 |

BAND RATIO PARAMETER -0.179
TRANSFORMED PARAMETER 0.566



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1267-17434
DATE ACQUIRED: 16APR73

CELLS 2283 TO 2290
LINES 1372 TO 1379
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

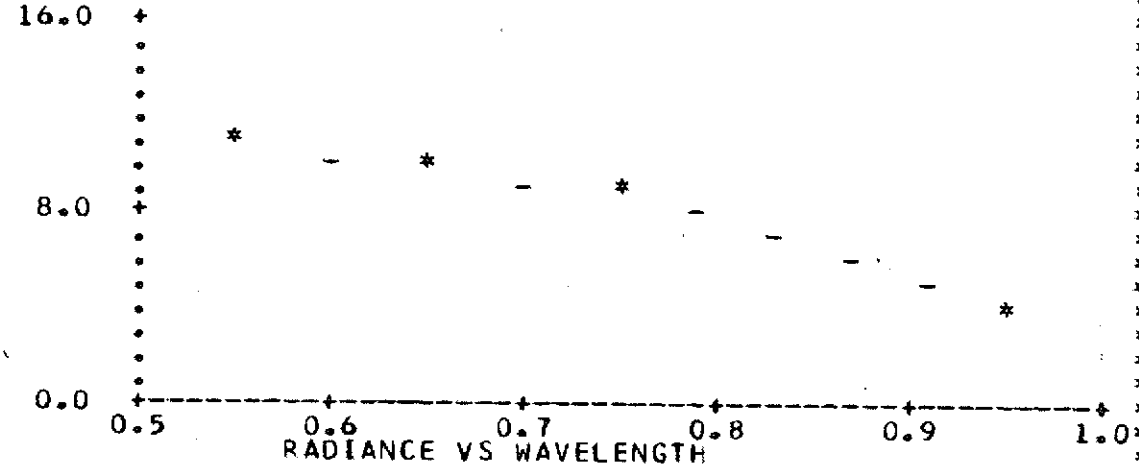
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.20 | 2.28 | .5 - .6 |
| BAND 5 | 10.32 | 2.53 | .6 - .7 |
| BAND 6 | 9.22 | 2.07 | .7 - .8 |
| BAND 7 | 4.47 | 3.60 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.984 | 0.959 | -0.215 |
| BAND 5 | 0.984 | 1.000 | 0.950 | -0.258 |
| BAND 6 | 0.959 | 0.950 | 1.000 | -0.172 |
| BAND 7 | -0.215 | -0.258 | -0.172 | 1.000 |

BAND RATIO PARAMETER -0.396
TRANSFORMED PARAMETER 0.323




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1267-17434
DATE ACQUIRED: 16APR73

CELLS 2357 TO 2372
LINES 1325 TO 1332
TOTAL POINTS 128

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

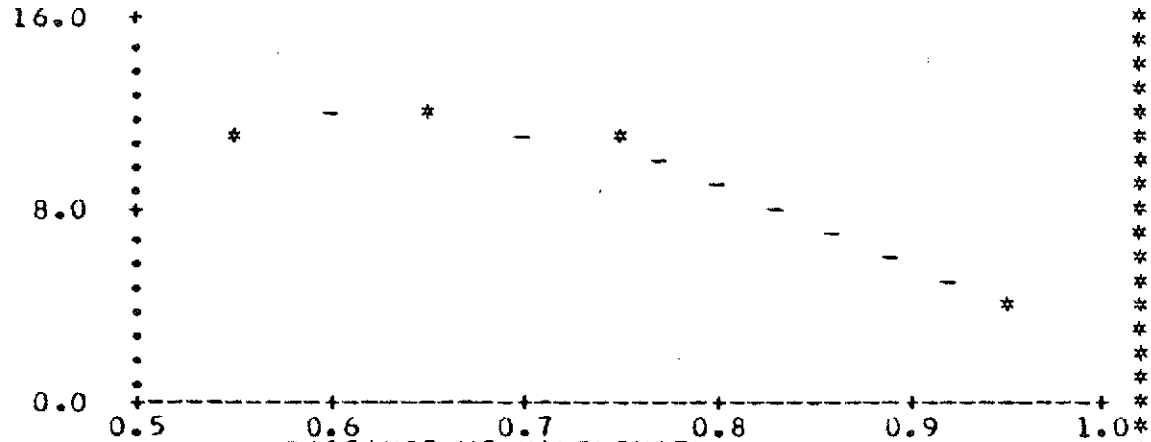
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.64 | 0.42 | .5 - .6 |
| BAND 5 | 11.89 | 0.76 | .6 - .7 |
| BAND 6 | 10.89 | 0.51 | .7 - .8 |
| BAND 7 | 4.40 | 4.18 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.685 | 0.537 | 0.095 |
| BAND 5 | 0.685 | 1.000 | 0.635 | -0.119 |
| BAND 6 | 0.537 | 0.635 | 1.000 | -0.044 |
| BAND 7 | 0.095 | -0.119 | -0.044 | 1.000 |

BAND RATIO PARAMETER -0.459
TRANSFORMED PARAMETER 0.201




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1267-17434
DATE ACQUIRED: 16APR73

CELLS 2227 TO 2246
LINES 1337 TO 1350
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

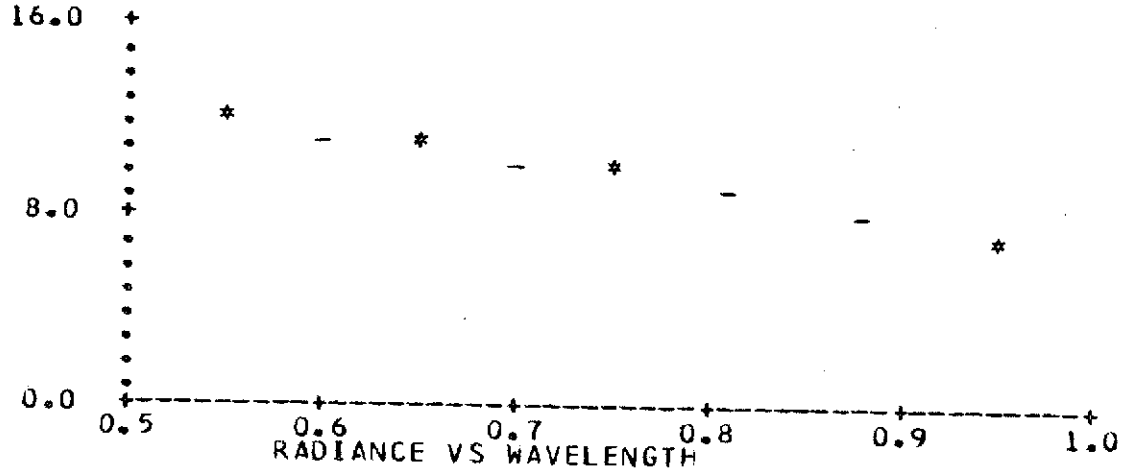
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.02 | 1.24 | .5 - .6 |
| BAND 5 | 10.53 | 1.25 | .6 - .7 |
| BAND 6 | 9.95 | 0.79 | .7 - .8 |
| BAND 7 | 6.53 | 3.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.909 | 0.794 | 0.266 |
| BAND 5 | 0.909 | 1.000 | 0.802 | 0.245 |
| BAND 6 | 0.794 | 0.802 | 1.000 | 0.219 |
| BAND 7 | 0.266 | 0.245 | 0.219 | 1.000 |

BAND RATIO PARAMETER -0.235
TRANSFORMED PARAMETER 0.515



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1267-17434
DATE ACQUIRED: 16APR73

CELLS 2349 TO 2356
LINES 1342 TO 1348
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

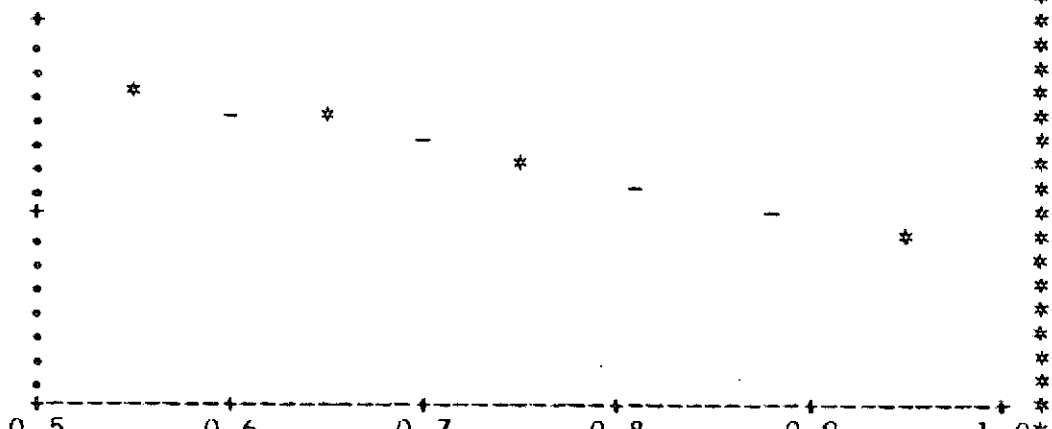
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.65 | 2.03 | .5 - .6 |
| BAND 5 | 12.13 | 2.13 | .6 - .7 |
| BAND 6 | 10.47 | 1.53 | .7 - .8 |
| BAND 7 | 7.14 | 3.26 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.956 | 0.925 | 0.777 |
| BAND 5 | 0.956 | 1.000 | 0.939 | 0.725 |
| BAND 6 | 0.925 | 0.939 | 1.000 | 0.688 |
| BAND 7 | 0.777 | 0.725 | 0.688 | 1.000 |

BAND RATIO PARAMETER -0.259
TRANSFORMED PARAMETER 0.491




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1285-17433
DATE ACQUIRED: 04MAY73

CELLS 2303 TO 2310
LINES 1338 TO 1345
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

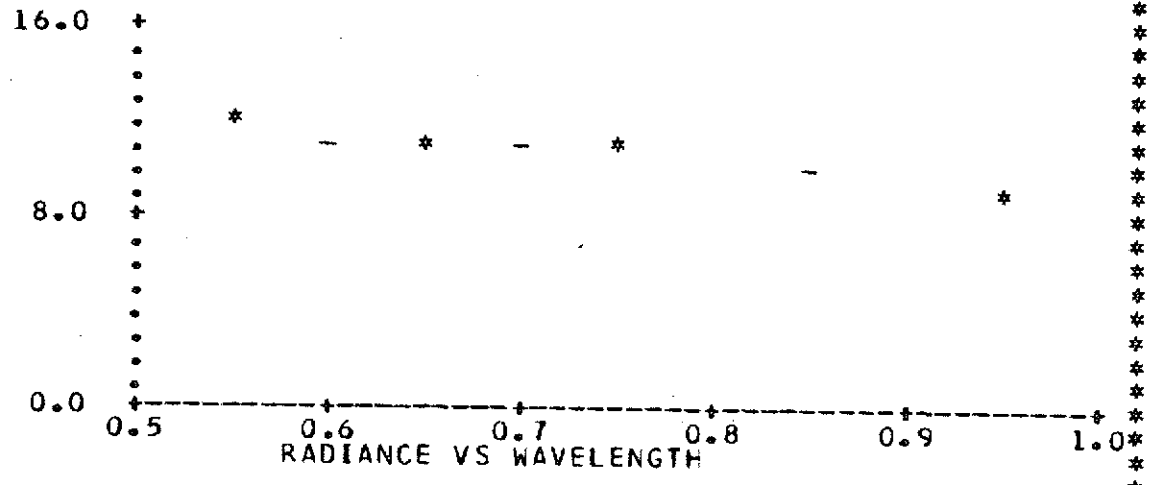
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.58 | 1.17 | .5 - .6 |
| BAND 5 | 10.55 | 1.64 | .6 - .7 |
| BAND 6 | 10.55 | 0.44 | .7 - .8 |
| BAND 7 | 9.19 | 0.45 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.933 | 0.554 | -0.373 |
| BAND 5 | 0.933 | 1.000 | 0.504 | -0.510 |
| BAND 6 | 0.554 | 0.504 | 1.000 | 0.179 |
| BAND 7 | -0.373 | -0.510 | 0.179 | 1.000 |

BAND RATIO PARAMETER -0.069
TRANSFORMED PARAMETER 0.656



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1285-17433
DATE ACQUIRED: 04MAY73

CELLS 2377 TO 2392
LINES 1291 TO 1298
TOTAL POINTS 128

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

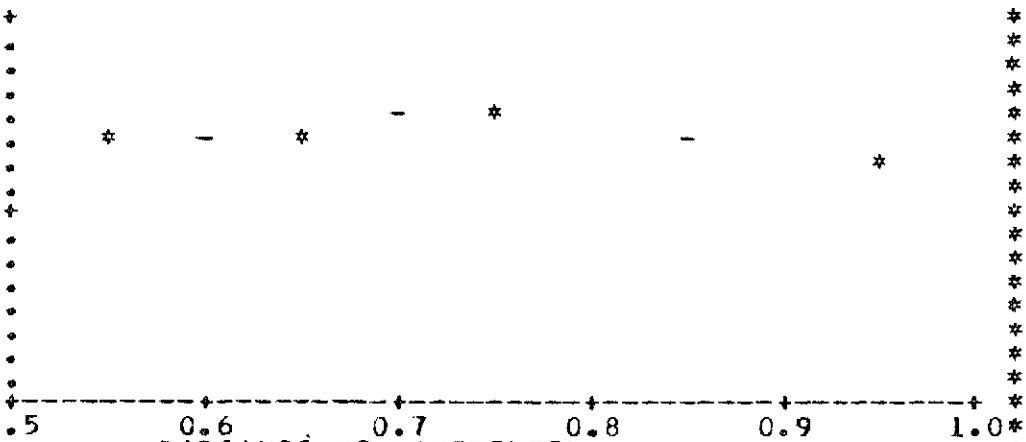
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.56 | 0.55 | .5 - .6 |
| BAND 5 | 11.24 | 1.20 | .6 - .7 |
| BAND 6 | 11.58 | 0.55 | .7 - .8 |
| BAND 7 | 9.90 | 0.37 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.765 | 0.627 | 0.344 |
| BAND 5 | 0.765 | 1.000 | 0.673 | 0.359 |
| BAND 6 | 0.627 | 0.673 | 1.000 | 0.612 |
| BAND 7 | 0.344 | 0.359 | 0.612 | 1.000 |

BAND RATIO PARAMETER -0.063
TRANSFORMED PARAMETER 0.661



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1285-17433
DATE ACQUIRED: 04MAY73

CELLS 2247 TO 2266
LINES 1305 TO 1318
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

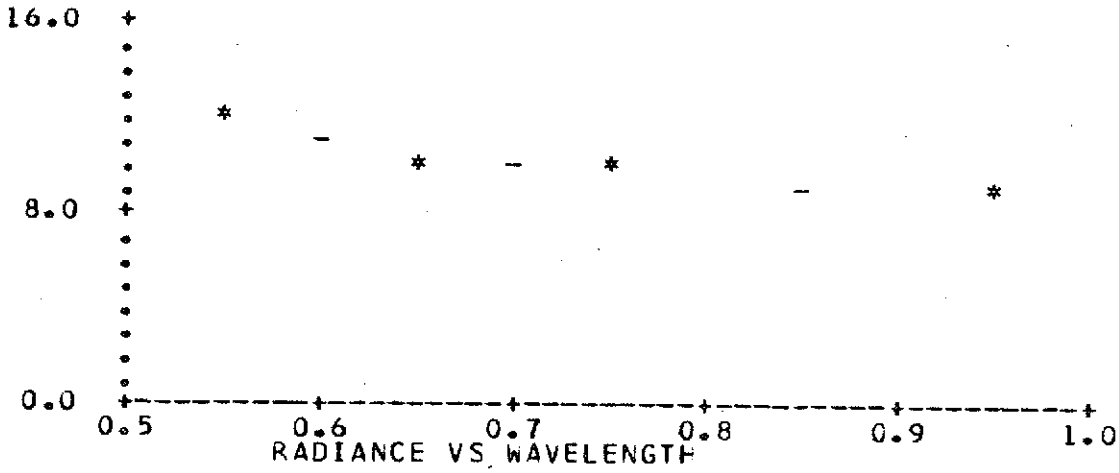
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.99 | 1.35 | .5 - .6 |
| BAND 5 | 10.48 | 1.44 | .6 - .7 |
| BAND 6 | 10.41 | 0.91 | .7 - .8 |
| BAND 7 | 8.80 | 0.70 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.944 | 0.843 | 0.735 |
| BAND 5 | 0.944 | 1.000 | 0.816 | 0.698 |
| BAND 6 | 0.843 | 0.816 | 1.000 | 0.895 |
| BAND 7 | 0.735 | 0.698 | 0.895 | 1.000 |

BAND RATIO PARAMETER -0.088
TRANSFORMED PARAMETER 0.642



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1285-17433
DATE ACQUIRED: 04MAY73

CELLS 2367 TO 2374
LINES 1309 TO 1315
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

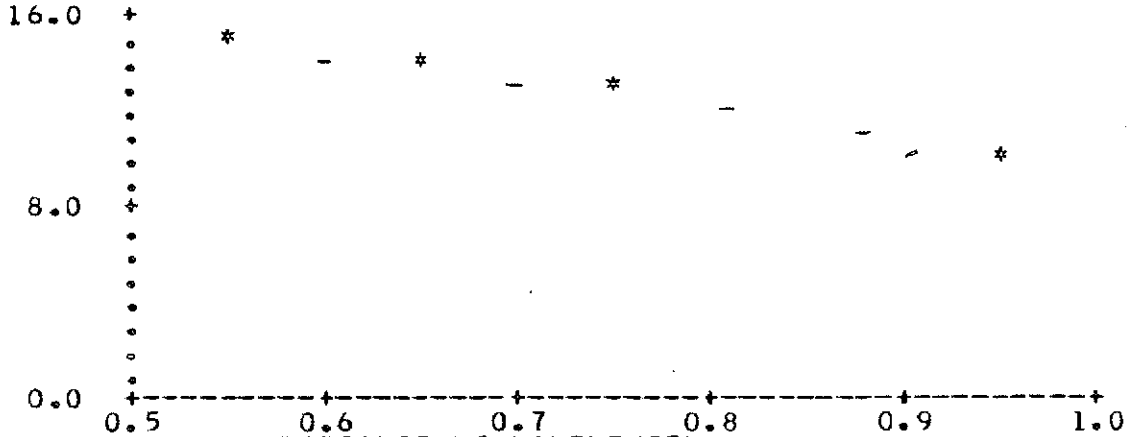
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.72 | 2.00 | .5 - .6 |
| BAND 5 | 14.16 | 2.29 | .6 - .7 |
| BAND 6 | 12.70 | 1.68 | .7 - .8 |
| BAND 7 | 10.34 | 1.27 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.939 | 0.944 | 0.910 |
| BAND 5 | 0.939 | 1.000 | 0.944 | 0.929 |
| BAND 6 | 0.944 | 0.944 | 1.000 | 0.969 |
| BAND 7 | 0.910 | 0.929 | 0.969 | 1.000 |

BAND RATIO PARAMETER -0.156
TRANSFORMED PARAMETER 0.587




PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1303-17432
DATE ACQUIRED: 22MAY73

CELLS 2247 TO 2254
LINES 1324 TO 1331
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

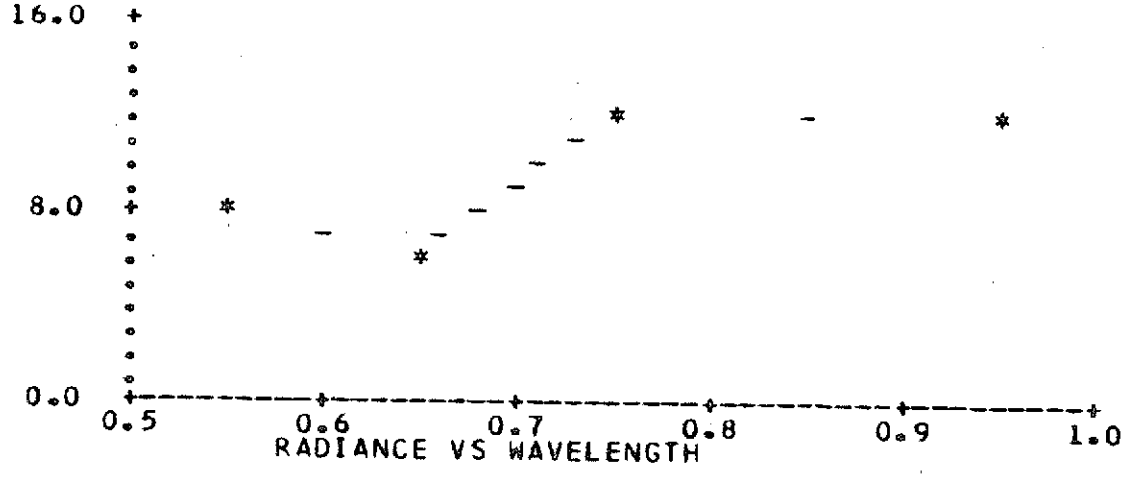
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.04 | 0.82 | .5 - .6 |
| BAND 5 | 5.61 | 1.07 | .6 - .7 |
| BAND 6 | 12.16 | 0.46 | .7 - .8 |
| BAND 7 | 12.46 | 0.64 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.933 | 0.060 | -0.630 |
| BAND 5 | 0.933 | 1.000 | -0.037 | -0.687 |
| BAND 6 | 0.060 | -0.037 | 1.000 | 0.451 |
| BAND 7 | -0.630 | -0.687 | 0.451 | 1.000 |

BAND RATIO PARAMETER 0.379
TRANSFORMED PARAMETER 0.937



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23OCT73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1 CELLS 2321 TO 2336
IMAGE IDENTIFIER: 1303-17432 LINES 1278 TO 1286
DATE ACQUIRED: 22MAY73 TOTAL POINTS 144

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

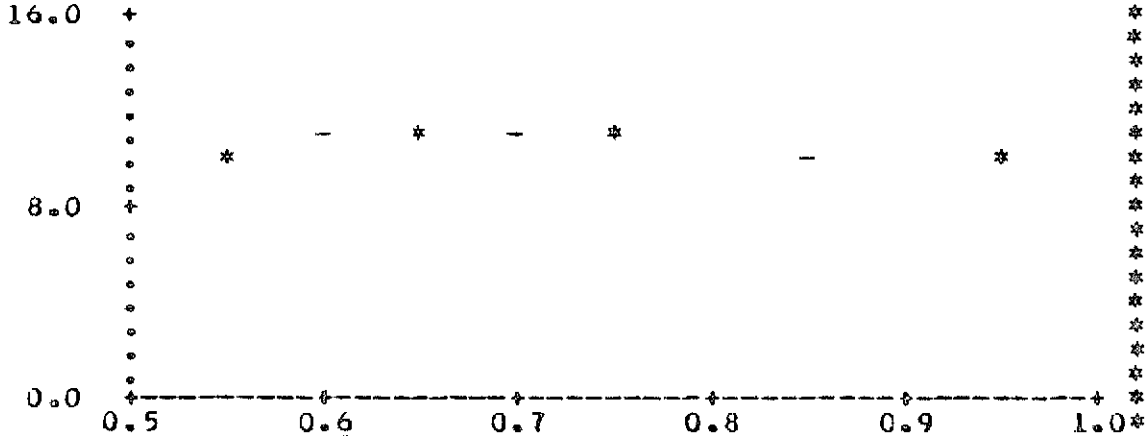
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.95 | 0.60 | .5 - .6 |
| BAND 5 | 10.54 | 0.93 | .6 - .7 |
| BAND 6 | 11.30 | 0.79 | .7 - .8 |
| BAND 7 | 9.79 | 0.64 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.801 | 0.556 | 0.400 |
| BAND 5 | 0.801 | 1.000 | 0.648 | 0.396 |
| BAND 6 | 0.556 | 0.648 | 1.000 | 0.855 |
| BAND 7 | 0.400 | 0.396 | 0.855 | 1.000 |

BAND RATIO PARAMETER -0.037
TRANSFORMED PARAMETER 0.681



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1303-17432
DATE ACQUIRED: 22MAY73

CELLS 2193 TO 2210
LINES 1290 TO 1304
TOTAL POINTS 270

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

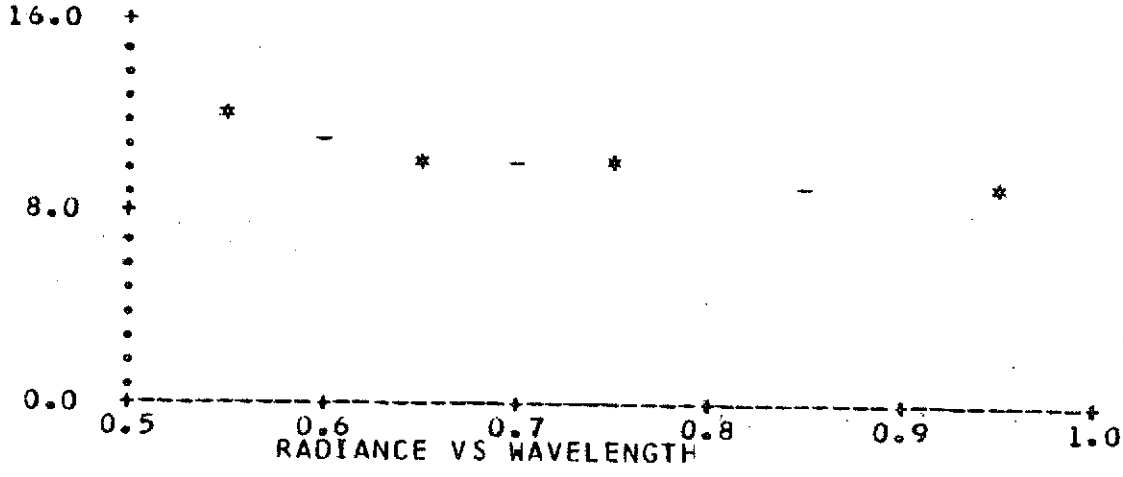
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.74 | 1.35 | .5 - .6 |
| BAND 5 | 10.49 | 1.31 | .6 - .7 |
| BAND 6 | 10.44 | 0.83 | .7 - .8 |
| BAND 7 | 8.94 | 0.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.938 | 0.860 | 0.762 |
| BAND 5 | 0.938 | 1.000 | 0.859 | 0.745 |
| BAND 6 | 0.860 | 0.859 | 1.000 | 0.876 |
| BAND 7 | 0.762 | 0.745 | 0.876 | 1.000 |

BAND RATIO PARAMETER -0.080
TRANSFORMED PARAMETER 0.648



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1303-17432
DATE ACQUIRED: 22MAY73

CELLS 2311 TO 2318
LINES 1295 TO 1301
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

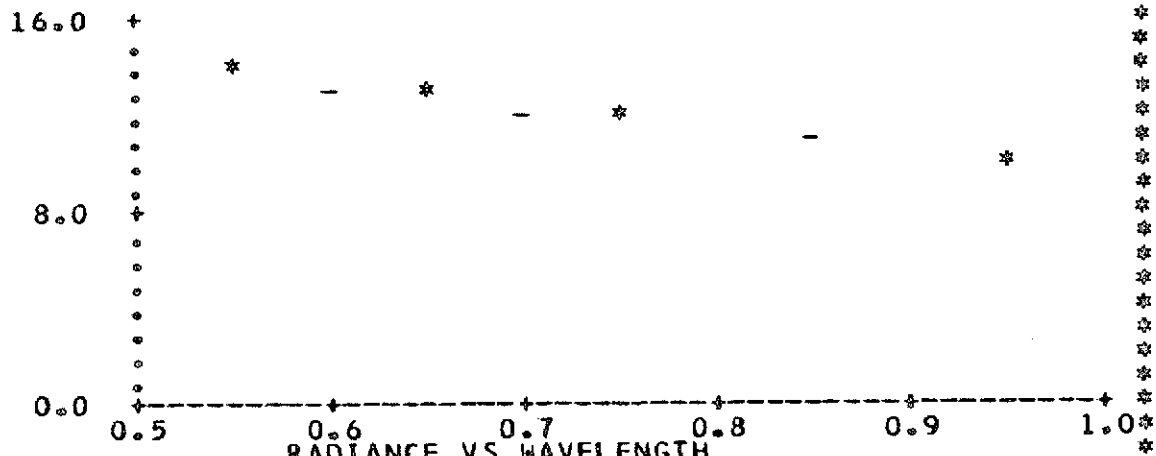
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.99 | 1.93 | .5 - .6 |
| BAND 5 | 13.47 | 2.02 | .6 - .7 |
| BAND 6 | 12.43 | 1.54 | .7 - .8 |
| BAND 7 | 10.30 | 1.10 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.955 | 0.948 | 0.930 |
| BAND 5 | 0.955 | 1.000 | 0.937 | 0.911 |
| BAND 6 | 0.948 | 0.937 | 1.000 | 0.956 |
| BAND 7 | 0.930 | 0.911 | 0.956 | 1.000 |

BAND RATIO PARAMETER -0.133
TRANSFORMED PARAMETER 0.605




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1320-17372
DATE ACQUIRED: 08JUN73

CELLS 179 TO 186
LINES 1691 TO 1696
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

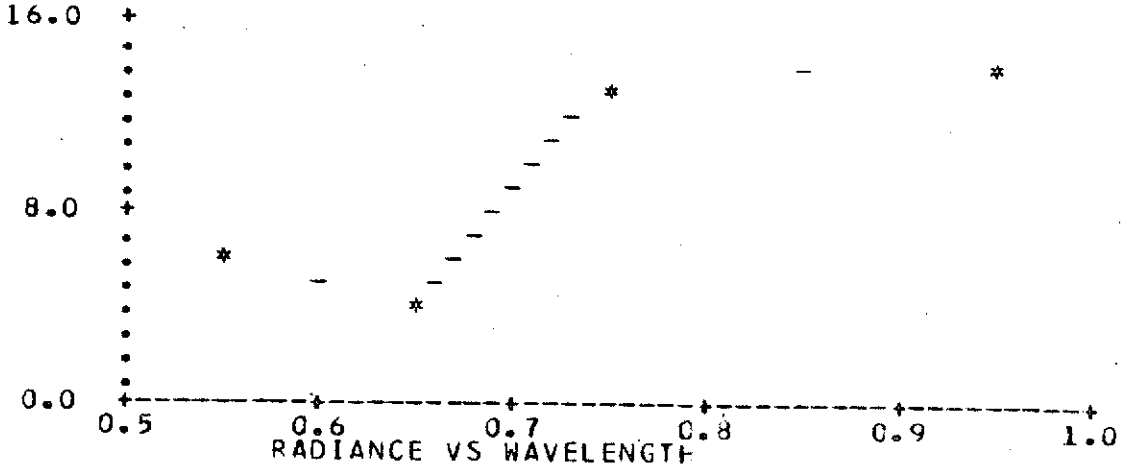
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.49 | 0.65 | .5 - .6 |
| BAND 5 | 3.64 | 0.72 | .6 - .7 |
| BAND 6 | 12.70 | 0.75 | .7 - .8 |
| BAND 7 | 13.73 | 0.88 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.898 | -0.702 | -0.841 |
| BAND 5 | 0.898 | 1.000 | -0.714 | -0.866 |
| BAND 6 | -0.702 | -0.714 | 1.000 | 0.913 |
| BAND 7 | -0.841 | -0.866 | 0.913 | 1.000 |

BAND RATIO PARAMETER 0.581
TRANSFORMED PARAMETER 1.040



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 P1
IMAGE IDENTIFIER: 1320-17372
DATE ACQUIRED: 08JUN73

CELLS 255 TO 268
LINES 1643 TO 1650
TOTAL POINTS 112

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

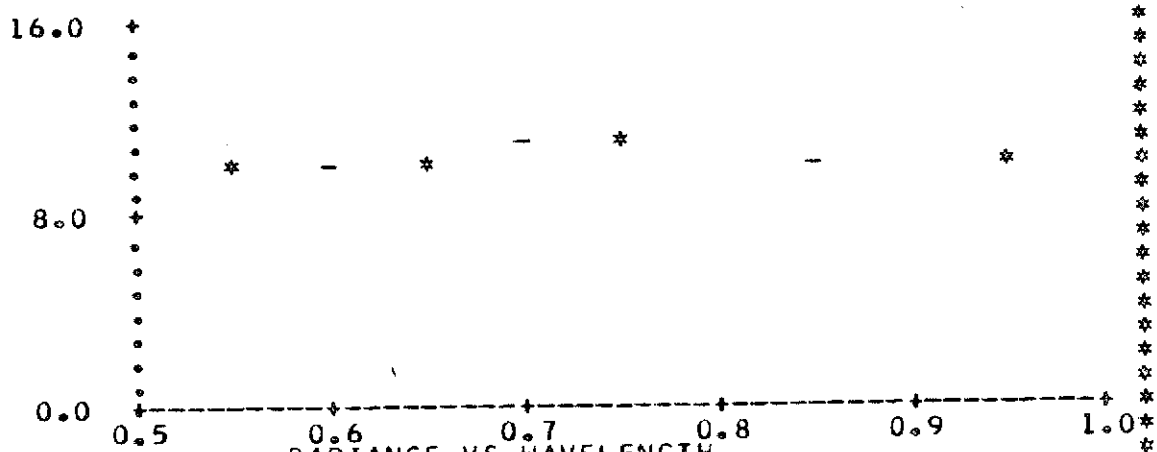
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.23 | 0.70 | .5 - .6 |
| BAND 5 | 10.37 | 1.12 | .6 - .7 |
| BAND 6 | 11.08 | 0.63 | .7 - .8 |
| BAND 7 | 9.51 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.846 | 0.477 | 0.049 |
| BAND 5 | 0.846 | 1.000 | 0.567 | -0.025 |
| BAND 6 | 0.477 | 0.567 | 1.000 | 0.644 |
| BAND 7 | 0.049 | -0.025 | 0.644 | 1.000 |

BAND RATIO PARAMETER -0.043
TRANSFORMED PARAMETER 0.676




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1320-17372
DATE ACQUIRED: 08JUN73

CELLS 125 TO 142
LINES 1656 TO 1668
TOTAL POINTS 234

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

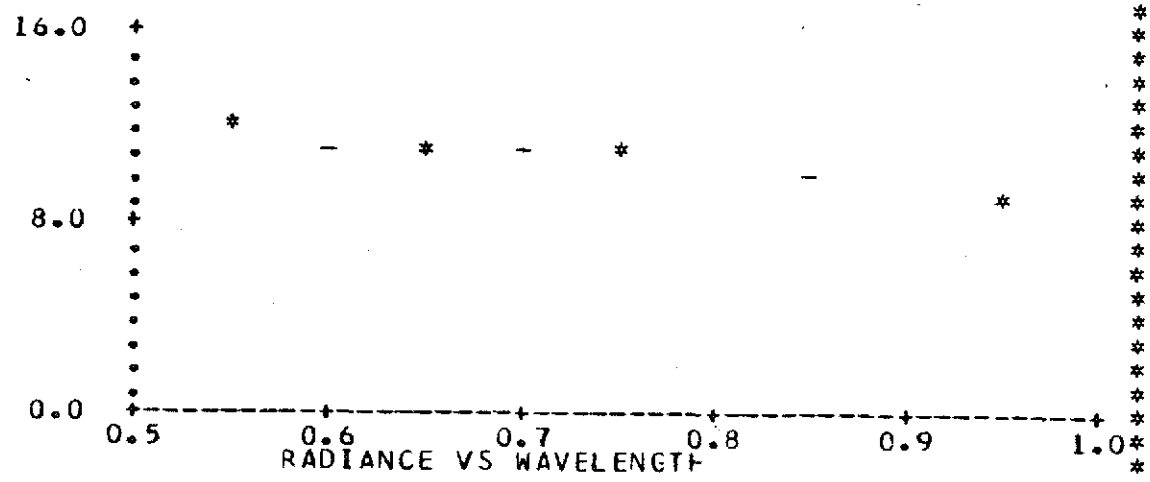
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.34 | 1.37 | .5 - .6 |
| BAND 5 | 11.16 | 1.46 | .6 - .7 |
| BAND 6 | 10.60 | 0.93 | .7 - .8 |
| BAND 7 | 8.77 | 0.66 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.939 | 0.896 | 0.834 |
| BAND 5 | 0.939 | 1.000 | 0.864 | 0.808 |
| BAND 6 | 0.896 | 0.864 | 1.000 | 0.909 |
| BAND 7 | 0.834 | 0.808 | 0.909 | 1.000 |

BAND RATIO PARAMETER -0.120
TRANSFORMED PARAMETER 0.617



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1320-17372
DATE ACQUIRED: 08JUN73

CELLS 243 TO 250
LINES 1660 TO 1667
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

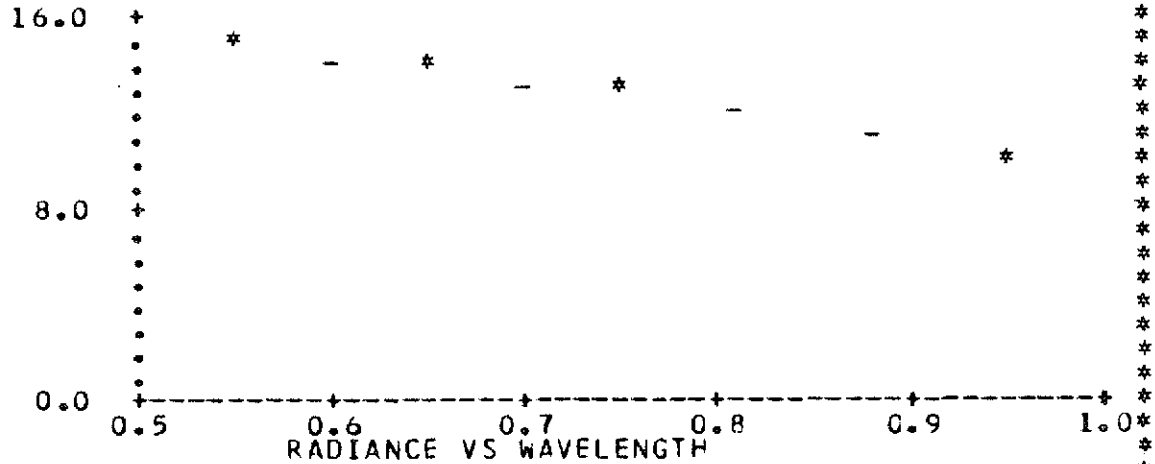
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.51 | 1.87 | .5 - .6 |
| BAND 5 | 13.97 | 1.77 | .6 - .7 |
| BAND 6 | 12.77 | 1.65 | .7 - .8 |
| BAND 7 | 10.40 | 1.22 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.931 | 0.936 | 0.926 |
| BAND 5 | 0.931 | 1.000 | 0.888 | 0.869 |
| BAND 6 | 0.936 | 0.888 | 1.000 | 0.971 |
| BAND 7 | 0.926 | 0.869 | 0.971 | 1.000 |

BAND RATIO PARAMETER -0.147
TRANSFORMED PARAMETER 0.594




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: PM 5 A
IMAGE IDENTIFIER: 1338-17371
DATE ACQUIRED: 26JUN73

CELLS 151 TO 158
LINES 1584 TO 1590
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

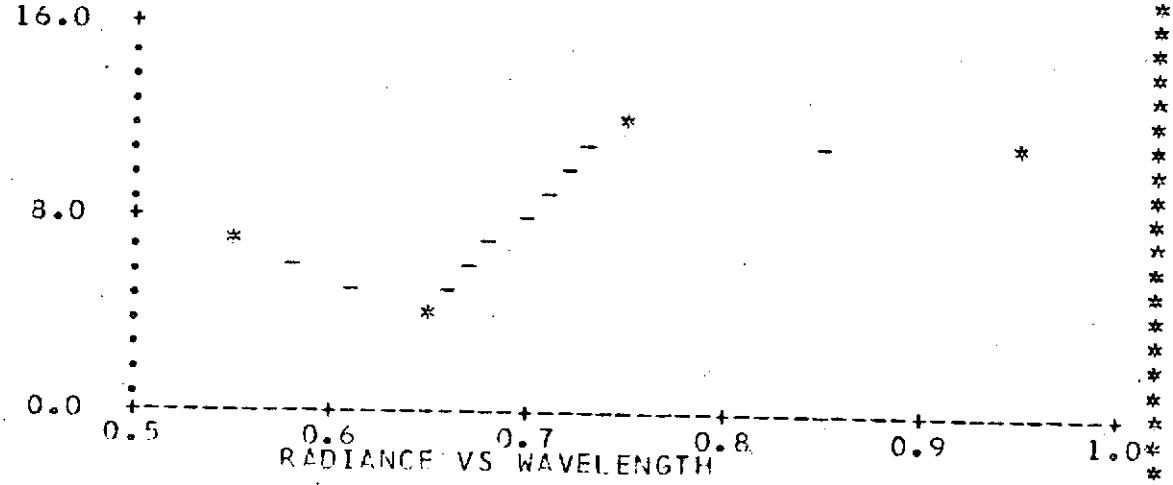
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.87 | 0.57 | .5 - .6 |
| BAND 5 | 4.18 | 0.81 | .6 - .7 |
| BAND 6 | 12.39 | 0.86 | .7 - .8 |
| BAND 7 | 11.41 | 3.71 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.909 | -0.738 | -0.350 |
| BAND 5 | 0.909 | 1.000 | -0.840 | -0.347 |
| BAND 6 | -0.738 | -0.840 | 1.000 | 0.314 |
| BAND 7 | -0.350 | -0.347 | 0.314 | 1.000 |

BAND RATIO PARAMETER 0.464
TRANSFORMED PARAMETER 0.982




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1339-17371
DATE ACQUIRED: 26JUN73

CELLS 229 TO 240
LINES 1538 TO 1545
TOTAL POINTS 96

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

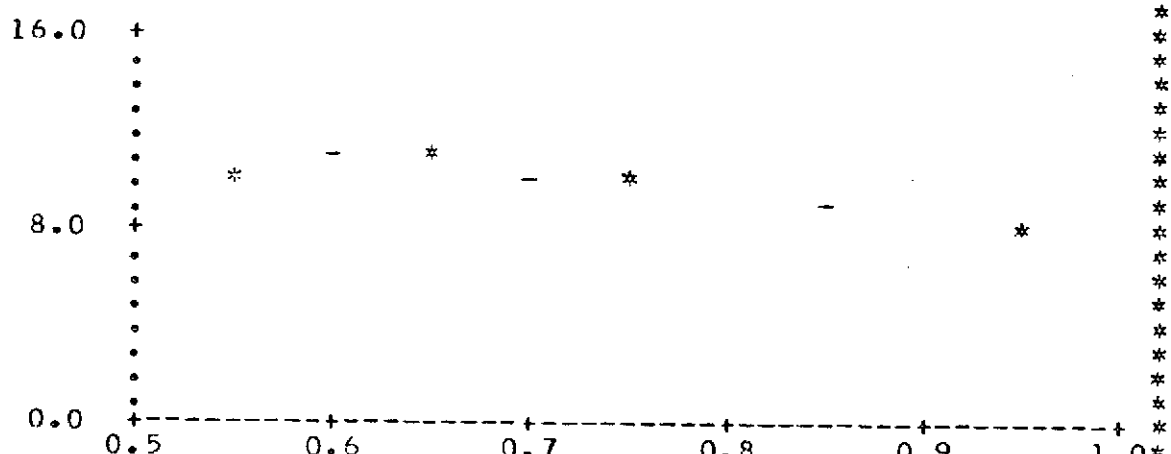
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.25 | 0.56 | .5 - .6 |
| BAND 5 | 11.13 | 0.75 | .6 - .7 |
| BAND 6 | 10.37 | 0.81 | .7 - .8 |
| BAND 7 | 8.21 | 1.18 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.716 | 0.064 | -0.233 |
| BAND 5 | 0.716 | 1.000 | -0.010 | -0.246 |
| BAND 6 | 0.064 | -0.010 | 1.000 | 0.732 |
| BAND 7 | -0.233 | -0.246 | 0.732 | 1.000 |

BAND RATIO PARAMETER -0.151
TRANSFORMED PARAMETER 0.591



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 P2
IMAGE IDENTIFIER: 1338-17371
DATE ACQUIRED: 26JUN73

CELLS 97 TO 116
LINES 1550 TO 1560
TOTAL POINTS 220

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

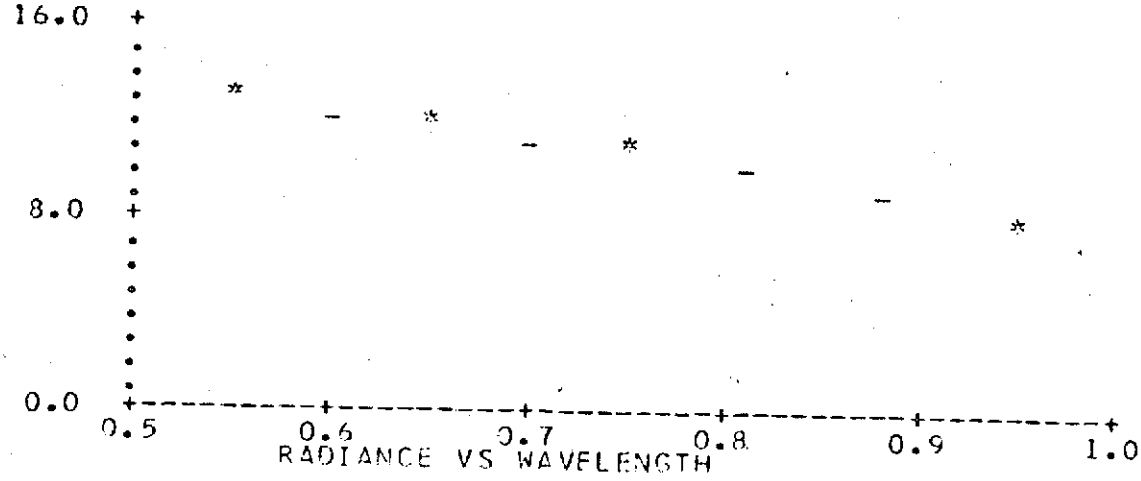
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.98 | 1.25 | .5 - .6 |
| BAND 5 | 11.85 | 1.43 | .6 - .7 |
| BAND 6 | 10.88 | 0.94 | .7 - .8 |
| BAND 7 | 8.36 | 1.28 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.799 | 0.751 | 0.099 |
| BAND 5 | 0.799 | 1.000 | 0.709 | 0.241 |
| BAND 6 | 0.751 | 0.709 | 1.000 | 0.200 |
| BAND 7 | 0.099 | 0.241 | 0.200 | 1.000 |

BAND RATIO PARAMETER -0.173
TRANSFORMED PARAMETER 0.572



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1338-17371
DATE ACQUIRED: 26JUN73

CELLS 217 TO 224
LINES 1556 TO 1561
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

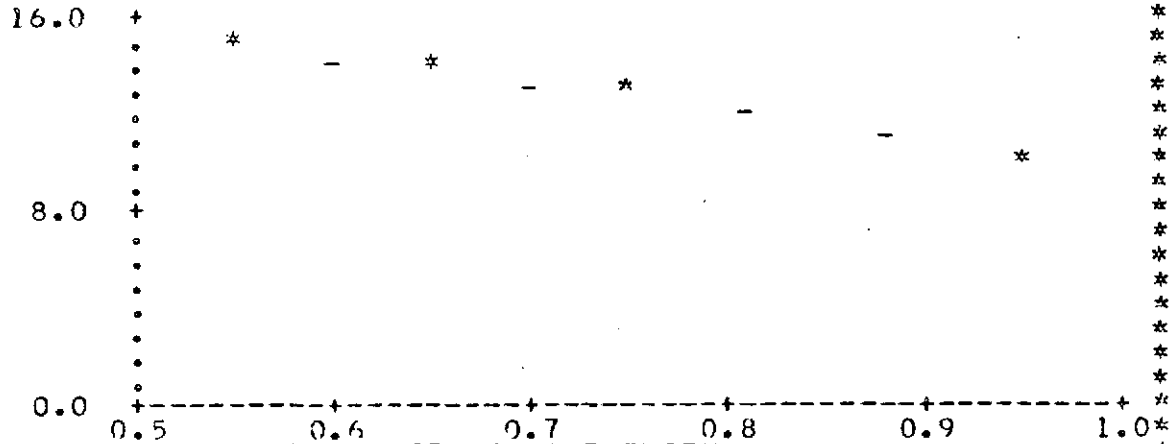
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.70 | 1.25 | .5 - .6 |
| BAND 5 | 14.19 | 1.27 | .6 - .7 |
| BAND 6 | 12.85 | 1.10 | .7 - .8 |
| BAND 7 | 9.59 | 1.91 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.934 | 0.902 | 0.236 |
| BAND 5 | 0.934 | 1.000 | 0.942 | 0.360 |
| BAND 6 | 0.902 | 0.942 | 1.000 | 0.338 |
| BAND 7 | 0.236 | 0.360 | 0.338 | 1.000 |

BAND RATIO PARAMETER -0.194
TRANSFORMED PARAMETER 0.553




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 30MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1339-17430
DATE ACQUIRED: 27JUN73

CELLS 2233 TO 2238
LINES 1309 TO 1315
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

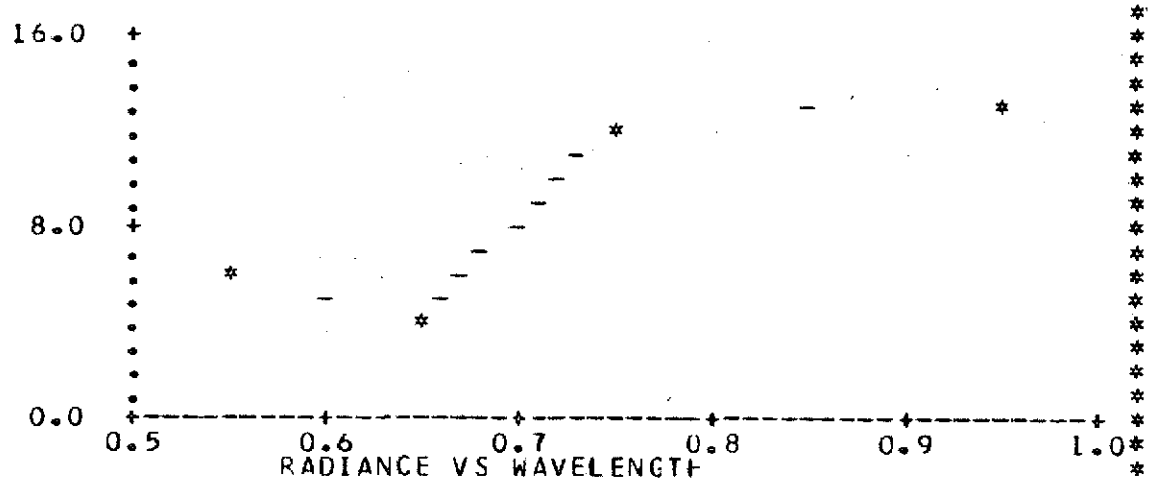
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.31 | 0.36 | .5 - .6 |
| BAND 5 | 3.61 | 0.48 | .6 - .7 |
| BAND 6 | 11.94 | 0.64 | .7 - .8 |
| BAND 7 | 13.14 | 0.78 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.757 | -0.578 | -0.514 |
| BAND 5 | 0.757 | 1.000 | -0.693 | -0.821 |
| BAND 6 | -0.578 | -0.693 | 1.000 | 0.825 |
| BAND 7 | -0.514 | -0.821 | 0.825 | 1.000 |

BAND RATIO PARAMETER 0.569
TRANSFORMED PARAMETER 1.034




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1339-17430
DATE ACQUIRED: 27JUN73

CELLS 2305 TO 2320
LINES 1262 TO 1269
TOTAL PCINTS 128

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

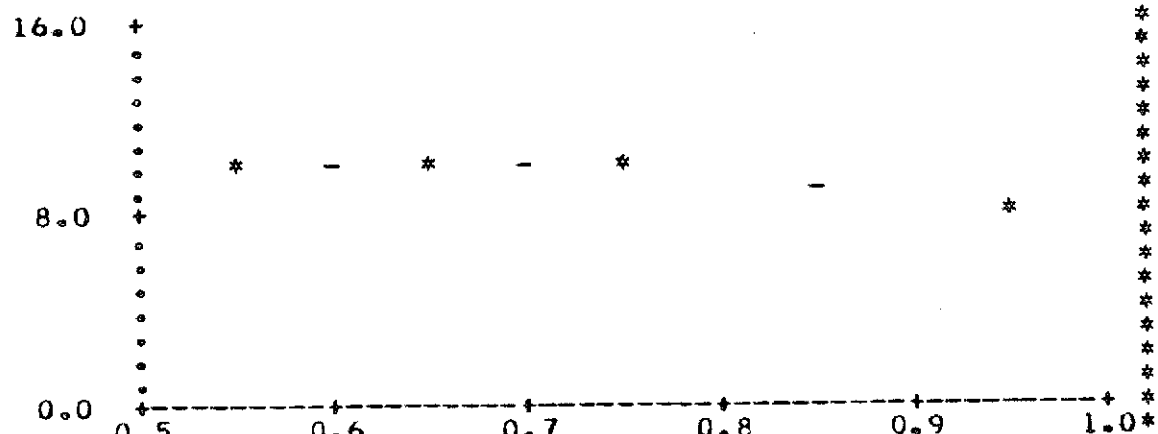
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.51 | 0.57 | .5 - .6 |
| BAND 5 | 10.50 | 0.92 | .6 - .7 |
| BAND 6 | 9.56 | 0.70 | .7 - .8 |
| BAND 7 | 7.68 | 0.73 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.678 | 0.289 | 0.043 |
| BAND 5 | 0.678 | 1.000 | 0.029 | -0.264 |
| BAND 6 | 0.289 | 0.029 | 1.000 | 0.849 |
| BAND 7 | 0.043 | -0.264 | 0.849 | 1.000 |

BAND RATIO PARAMETER -0.155
TRANSFORMED PARAMETER 0.587



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1339-17430
DATE ACQUIRED: 27JUN73

CELLS 2177 TO 2194
LINES 1275 TO 1288
TOTAL POINTS 252

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

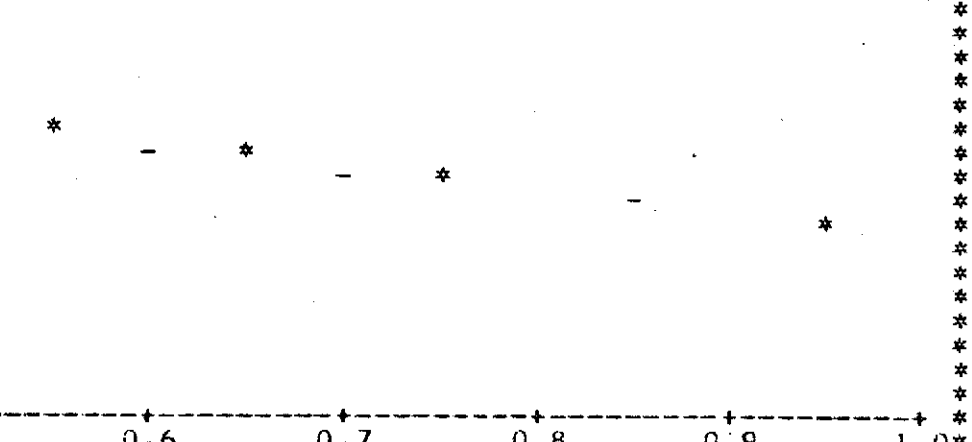
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.19 | 1.40 | .5 - .6 |
| BAND 5 | 11.32 | 1.40 | .6 - .7 |
| BAND 6 | 9.99 | 0.95 | .7 - .8 |
| BAND 7 | 8.10 | 0.66 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.909 | 0.908 | 0.843 |
| BAND 5 | 0.909 | 1.000 | 0.844 | 0.797 |
| BAND 6 | 0.908 | 0.844 | 1.000 | 0.898 |
| BAND 7 | 0.843 | 0.797 | 0.898 | 1.000 |

BAND RATIO PARAMETER -0.166
TRANSFORMED PARAMETER 0.578




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1339-17430
DATE ACQUIRED: 27JUN73

CELLS 2295 TO 2302
LINES 1279 TO 1285
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

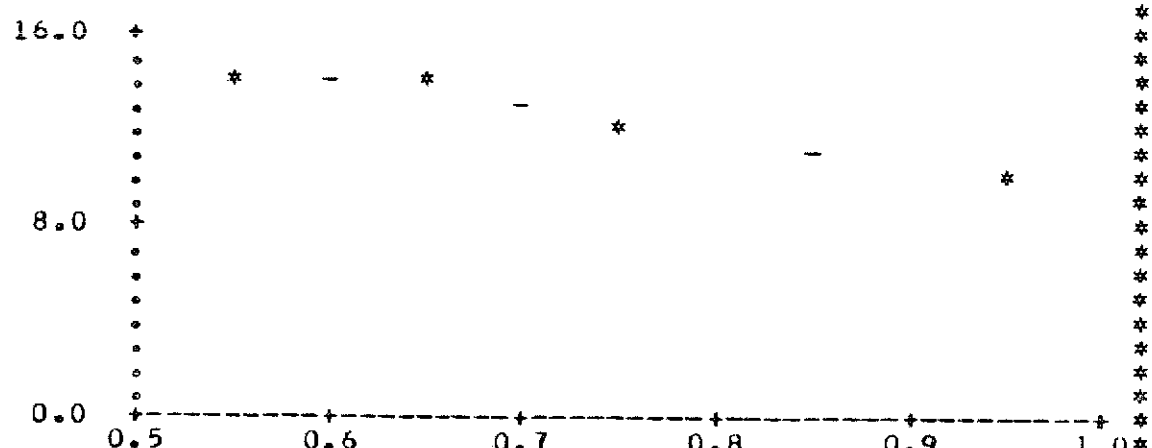
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.06 | 1.45 | .5 - .6 |
| BAND 5 | 13.86 | 1.61 | .6 - .7 |
| BAND 6 | 12.23 | 1.30 | .7 - .8 |
| BAND 7 | 9.65 | 0.97 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.899 | 0.945 | 0.942 |
| BAND 5 | 0.899 | 1.000 | 0.878 | 0.886 |
| BAND 6 | 0.945 | 0.878 | 1.000 | 0.965 |
| BAND 7 | 0.942 | 0.886 | 0.965 | 1.000 |

BAND RATIO PARAMETER -0.179
TRANSFORMED PARAMETER 0.567




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1356-17370
DATE ACQUIRED: 14JUL73

CELLS 139 TO 146
LINES 1582 TO 1588
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

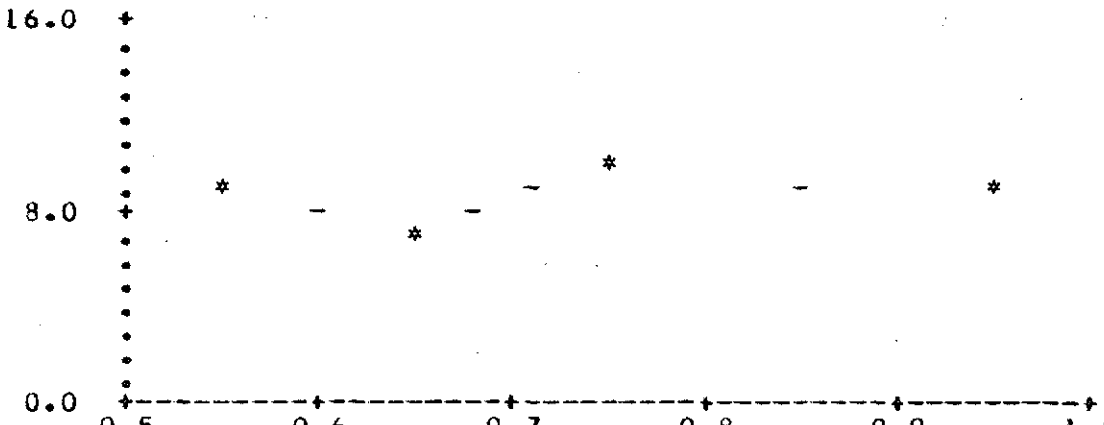
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.50 | 0.76 | .5 - .6 |
| BAND 5 | 6.74 | 1.56 | .6 - .7 |
| BAND 6 | 9.59 | 1.08 | .7 - .8 |
| BAND 7 | 8.63 | 1.58 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.932 | -0.762 | -0.852 |
| BAND 5 | 0.932 | 1.000 | -0.848 | -0.936 |
| BAND 6 | -0.762 | -0.848 | 1.000 | 0.954 |
| BAND 7 | -0.852 | -0.936 | 0.954 | 1.000 |

BAND RATIO PARAMETER 0.123
TRANSFORMED PARAMETER 0.789



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1356-17370
DATE ACQUIRED: 14JUL73

CELLS 211 TO 226
LINES 1536 TO 1543
TOTAL PCINTS 128

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

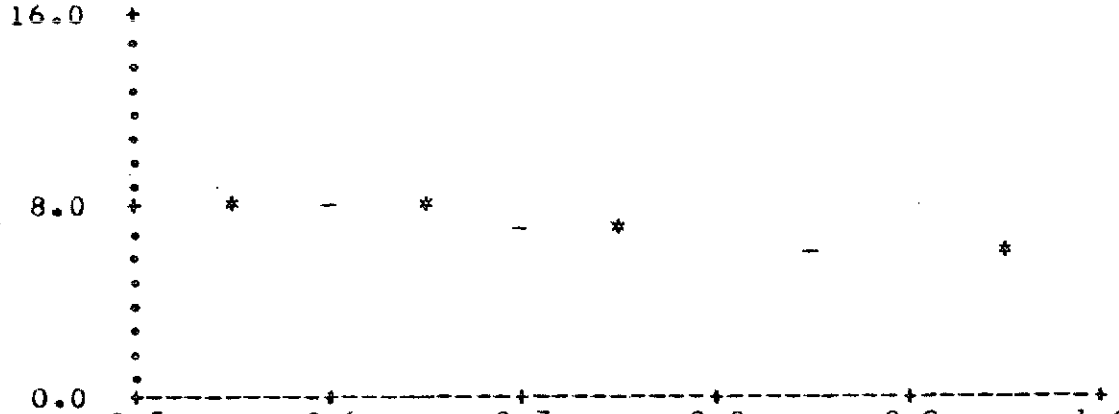
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.00 | 0.34 | .5 - .6 |
| BAND 5 | 8.32 | 0.39 | .6 - .7 |
| BAND 6 | 7.28 | 0.33 | .7 - .8 |
| BAND 7 | 5.74 | 0.34 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.401 | 0.547 | 0.358 |
| BAND 5 | 0.401 | 1.000 | 0.390 | -0.028 |
| BAND 6 | 0.547 | 0.390 | 1.000 | 0.549 |
| BAND 7 | 0.358 | -0.028 | 0.549 | 1.000 |

BAND RATIO PARAMETER -0.183
TRANSFORMED PARAMETER 0.563




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1356-17370
DATE ACQUIRED: 14JUL73

CELLS 83 TO 102
LINES 1548 TO 1560
TOTAL POINTS 260

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

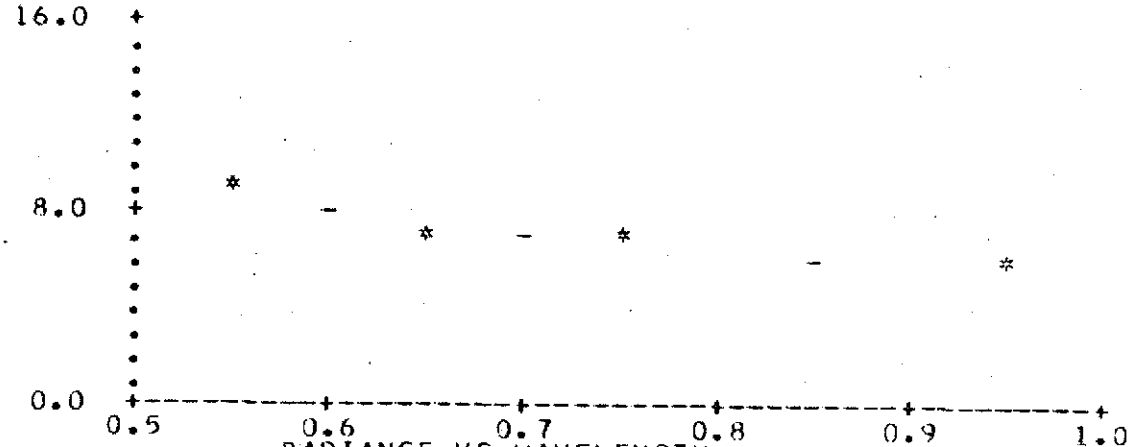
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.76 | 0.80 | .5 - .6 |
| BAND 5 | 7.46 | 1.05 | .6 - .7 |
| BAND 6 | 7.28 | 0.71 | .7 - .8 |
| BAND 7 | 5.95 | 0.79 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.894 | 0.532 | 0.303 |
| BAND 5 | 0.894 | 1.000 | 0.419 | 0.183 |
| BAND 6 | 0.532 | 0.419 | 1.000 | 0.905 |
| BAND 7 | 0.303 | 0.183 | 0.905 | 1.000 |

BAND RATIO PARAMETER -0.113
TRANSFORMED PARAMETER 0.622



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 19OCT73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1356-17370
DATE ACQUIRED: 14JUL73

CELLS 201 TO 206
LINES 1553 TO 1559
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

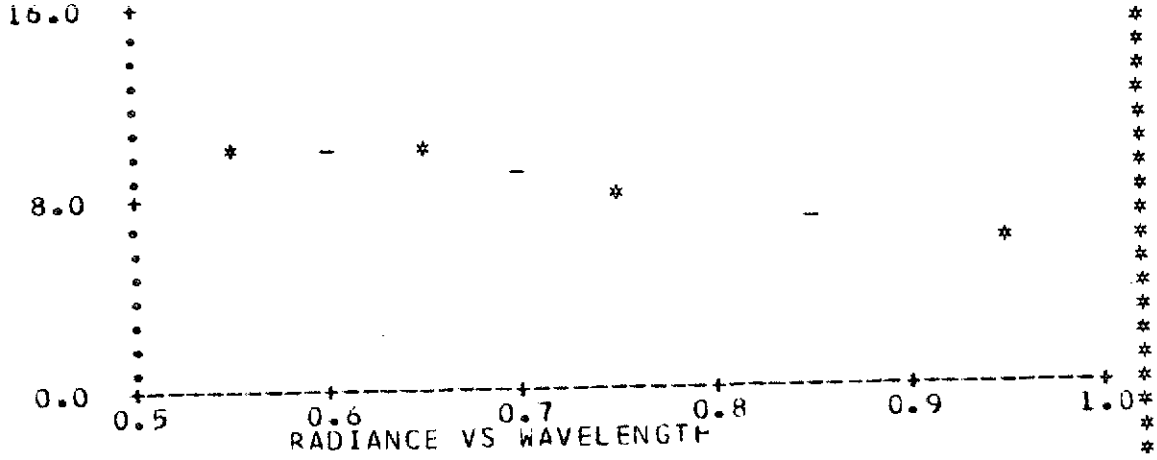
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.59 | 0.54 | .5 - .6 |
| BAND 5 | 9.58 | 0.64 | .6 - .7 |
| BAND 6 | 8.16 | 0.50 | .7 - .8 |
| BAND 7 | 6.34 | 0.35 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.673 | 0.823 | 0.761 |
| BAND 5 | 0.673 | 1.000 | 0.669 | 0.544 |
| BAND 6 | 0.823 | 0.669 | 1.000 | 0.792 |
| BAND 7 | 0.761 | 0.544 | 0.792 | 1.000 |

BAND RATIO PARAMETER -0.204
TRANSFORMED PARAMETER 0.544




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 15OCT73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1357-17424
DATE ACQUIRED: 15JUL73

CELLS 2195 TO 2202
LINES 1279 TO 1286
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

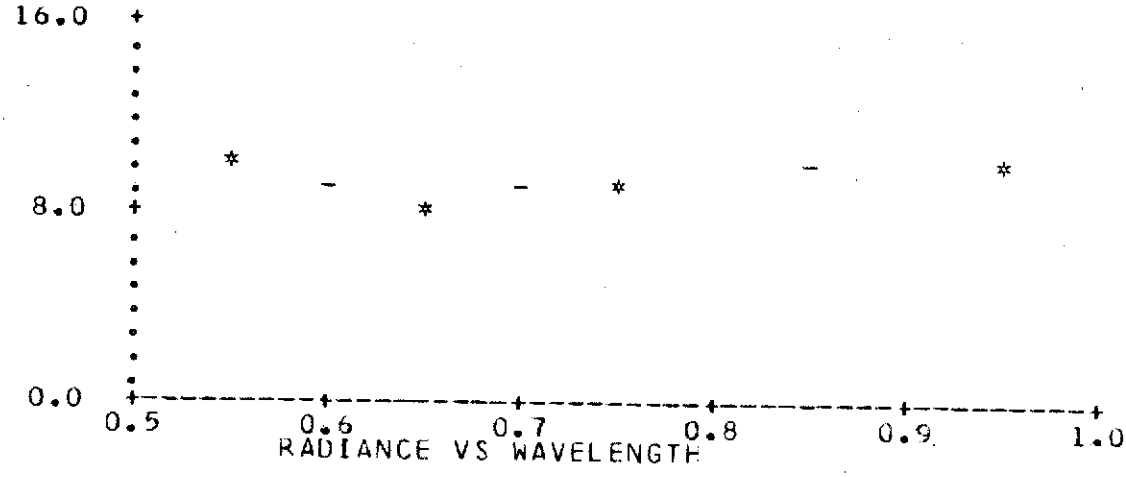
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.54 | 1.48 | .5 - .6 |
| BAND 5 | 8.24 | 2.01 | .6 - .7 |
| BAND 6 | 8.88 | 3.34 | .7 - .8 |
| BAND 7 | 10.05 | 3.62 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.962 | 0.124 | 0.513 |
| BAND 5 | 0.962 | 1.000 | 0.072 | 0.419 |
| BAND 6 | 0.124 | 0.072 | 1.000 | 0.255 |
| BAND 7 | 0.513 | 0.419 | 0.255 | 1.000 |

BAND RATIO PARAMETER 0.099
TRANSFORMED PARAMETER 0.774




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22OCT73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1 CELLS 2267 TO 2284
IMAGE IDENTIFIER: 1357-17424 LINES 1230 TO 1238
DATE ACQUIRED: 15JUL73 TOTAL POINTS 162

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

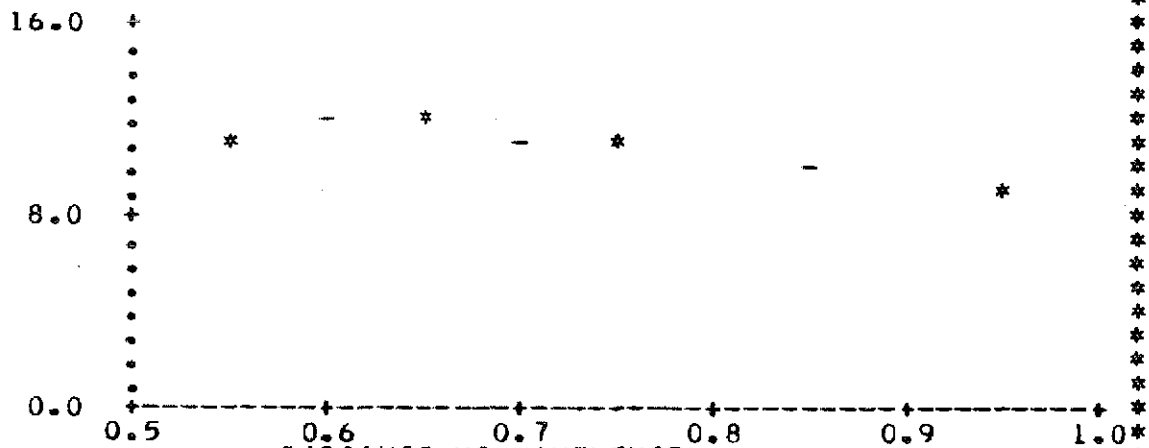
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.66 | 0.72 | .5 - .6 |
| BAND 5 | 12.29 | 1.16 | .6 - .7 |
| BAND 6 | 10.80 | 2.67 | .7 - .8 |
| BAND 7 | 9.09 | 2.13 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.751 | 0.084 | 0.060 |
| BAND 5 | 0.751 | 1.000 | 0.049 | 0.122 |
| BAND 6 | 0.084 | 0.049 | 1.000 | 0.018 |
| BAND 7 | 0.060 | 0.122 | 0.018 | 1.000 |

BAND RATIO PARAMETER -0.150
TRANSFORMED PARAMETER 0.592




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23OCT73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1357-17424
DATE ACQUIRED: 15JUL73

CELLS 2141 TO 2158
LINES 1244 TO 1257
TOTAL POINTS 252

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

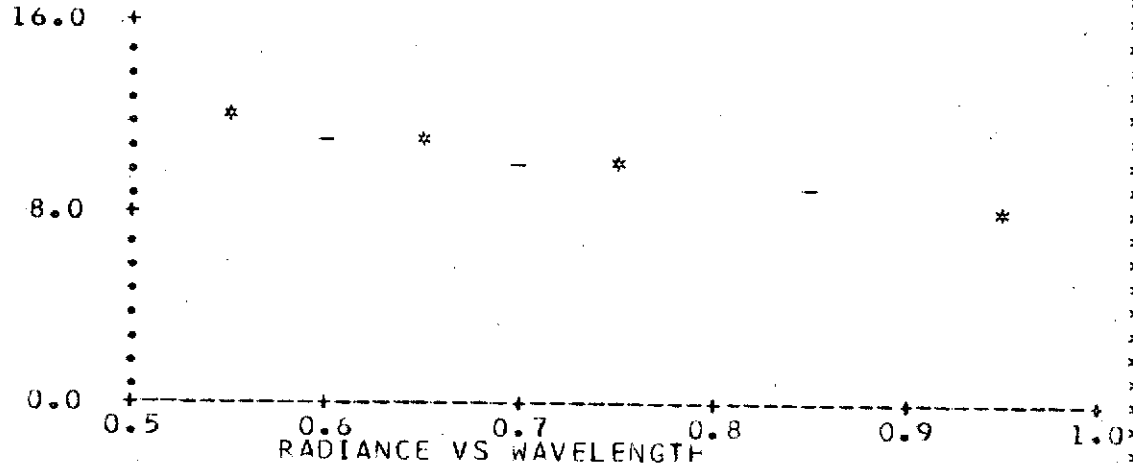
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.29 | 1.48 | .5 - .6 |
| BAND 5 | 11.34 | 1.59 | .6 - .7 |
| BAND 6 | 9.69 | 2.63 | .7 - .8 |
| BAND 7 | 8.05 | 2.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.926 | 0.316 | 0.192 |
| BAND 5 | 0.926 | 1.000 | 0.341 | 0.166 |
| BAND 6 | 0.316 | 0.341 | 1.000 | 0.032 |
| BAND 7 | 0.192 | 0.166 | 0.032 | 1.000 |

BAND RATIO PARAMETER -0.170
TRANSFORMED PARAMETER 0.575




PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY, 22OCT73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1357-17424
DATE ACQUIRED: 15JUL73

CELLS 2259 TO 2266
LINES 1249 TO 1255
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 59 DEGREES***

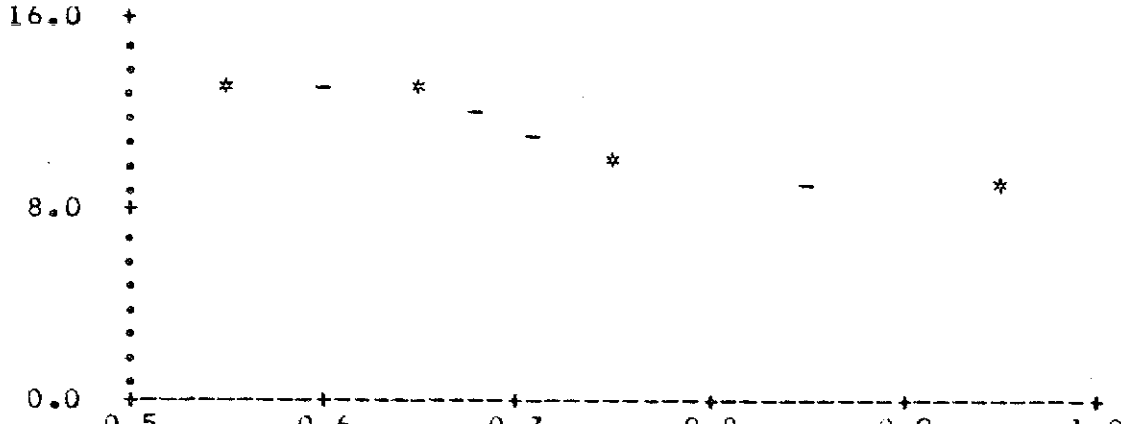
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.79 | 1.49 | .5 - .6 |
| BAND 5 | 13.15 | 1.89 | .6 - .7 |
| BAND 6 | 10.29 | 2.75 | .7 - .8 |
| BAND 7 | 8.71 | 2.31 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.955 | 0.426 | 0.380 |
| BAND 5 | 0.955 | 1.000 | 0.483 | 0.344 |
| BAND 6 | 0.426 | 0.483 | 1.000 | 0.144 |
| BAND 7 | 0.380 | 0.344 | 0.144 | 1.000 |

BAND RATIO PARAMETER -0.203
TRANSFORMED PARAMETER 0.545




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 22OCT73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1374-17365
DATE ACQUIRED: 01AUG73

CELLS 73 TO 80
LINES 1498 TO 1503
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

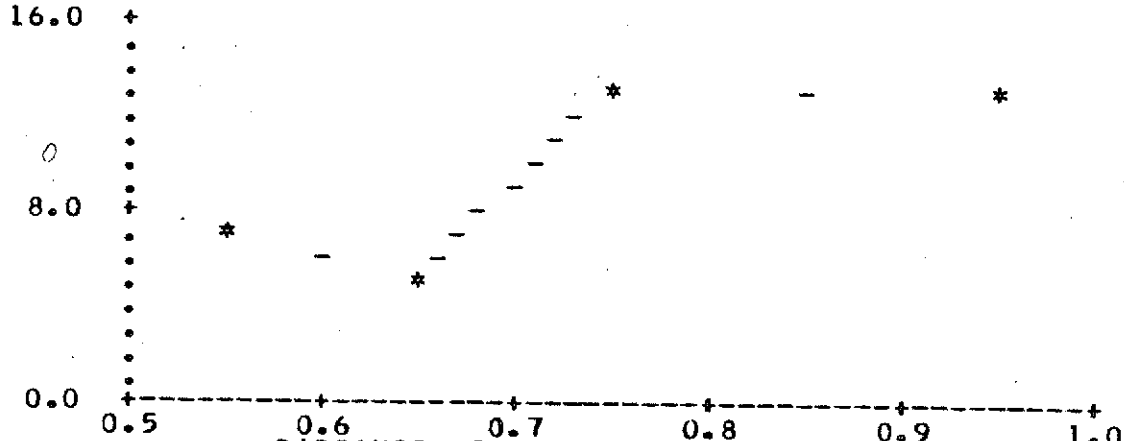
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.28 | 0.79 | .5 - .6 |
| BAND 5 | 4.65 | 1.18 | .6 - .7 |
| BAND 6 | 12.52 | 0.65 | .7 - .8 |
| BAND 7 | 13.30 | 1.05 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.946 | -0.512 | -0.593 |
| BAND 5 | 0.946 | 1.000 | -0.634 | -0.709 |
| BAND 6 | -0.512 | -0.634 | 1.000 | 0.857 |
| BAND 7 | -0.593 | -0.709 | 0.857 | 1.000 |

BAND RATIO PARAMETER 0.482
TRANSFORMED PARAMETER 0.991



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R1
IMAGE IDENTIFIER: 1374-17365
DATE ACQUIRED: 01AUG73

CELLS 149 TO 162
LINES 1451 TO 1459
TOTAL POINTS 126

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

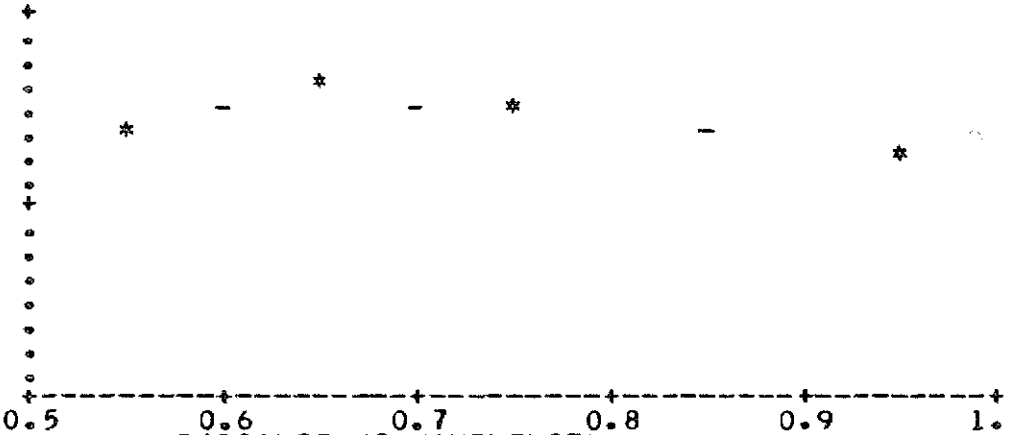
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.39 | 0.89 | .5 - .6 |
| BAND 5 | 13.32 | 1.46 | .6 - .7 |
| BAND 6 | 12.05 | 0.68 | .7 - .8 |
| BAND 7 | 9.98 | 0.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.912 | 0.820 | 0.339 |
| BAND 5 | 0.912 | 1.000 | 0.820 | 0.283 |
| BAND 6 | 0.820 | 0.820 | 1.000 | 0.499 |
| BAND 7 | 0.339 | 0.283 | 0.499 | 1.000 |

BAND RATIO PARAMETER -0.144
TRANSFORMED PARAMETER 0.597



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1374-17365
DATE ACQUIRED: 01AUG73

CELLS 21 TO 36
LINES 1462 TO 1476
TOTAL POINTS 240

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

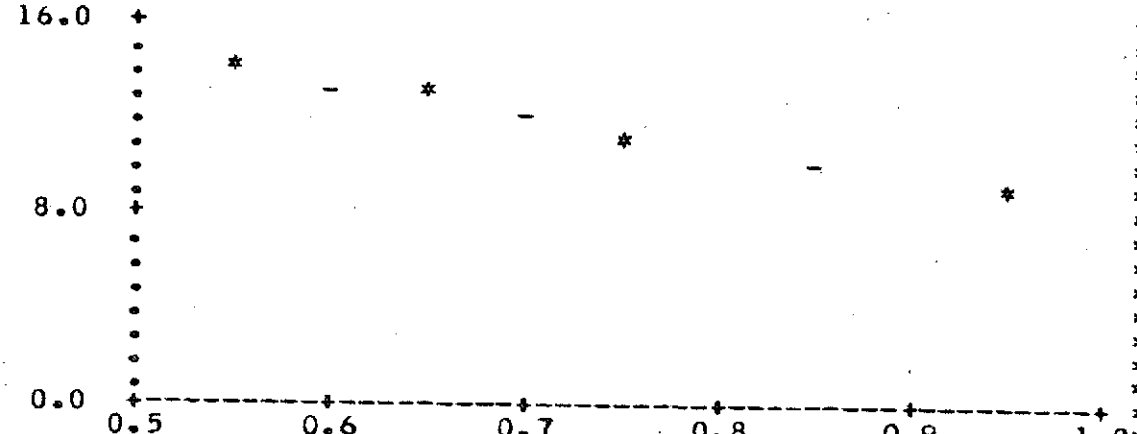
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.90 | 1.35 | .5 - .6 |
| BAND 5 | 13.03 | 1.67 | .6 - .7 |
| BAND 6 | 11.32 | 1.07 | .7 - .8 |
| BAND 7 | 9.24 | 0.74 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.911 | 0.931 | 0.890 |
| BAND 5 | 0.911 | 1.000 | 0.889 | 0.809 |
| BAND 6 | 0.931 | 0.889 | 1.000 | 0.916 |
| BAND 7 | 0.890 | 0.809 | 0.916 | 1.000 |

BAND RATIO PARAMETER -0.170
TRANSFORMED PARAMETER 0.574




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1374-17365
DATE ACQUIRED: 01AUG73

CELLS 137 TO 144
LINES 1469 TO 1475
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

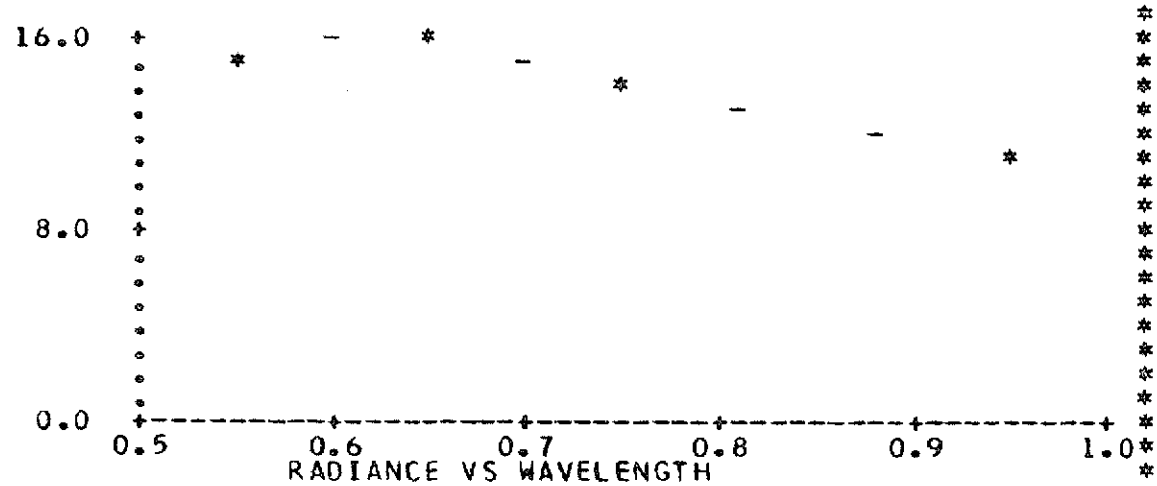
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 15.21 | 1.24 | .5 - .6 |
| BAND 5 | 15.87 | 1.38 | .6 - .7 |
| BAND 6 | 13.50 | 0.94 | .7 - .8 |
| BAND 7 | 10.86 | 0.61 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.864 | 0.892 | 0.861 |
| BAND 5 | 0.864 | 1.000 | 0.811 | 0.697 |
| BAND 6 | 0.892 | 0.811 | 1.000 | 0.892 |
| BAND 7 | 0.861 | 0.697 | 0.892 | 1.000 |

BAND RATIO PARAMETER -0.187
TRANSFORMED PARAMETER 0.559



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 08JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 A
IMAGE IDENTIFIER: 1411-17415
DATE ACQUIRED: 07SEP73

CELLS 2135 TO 2142
LINES 1263 TO 1270
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

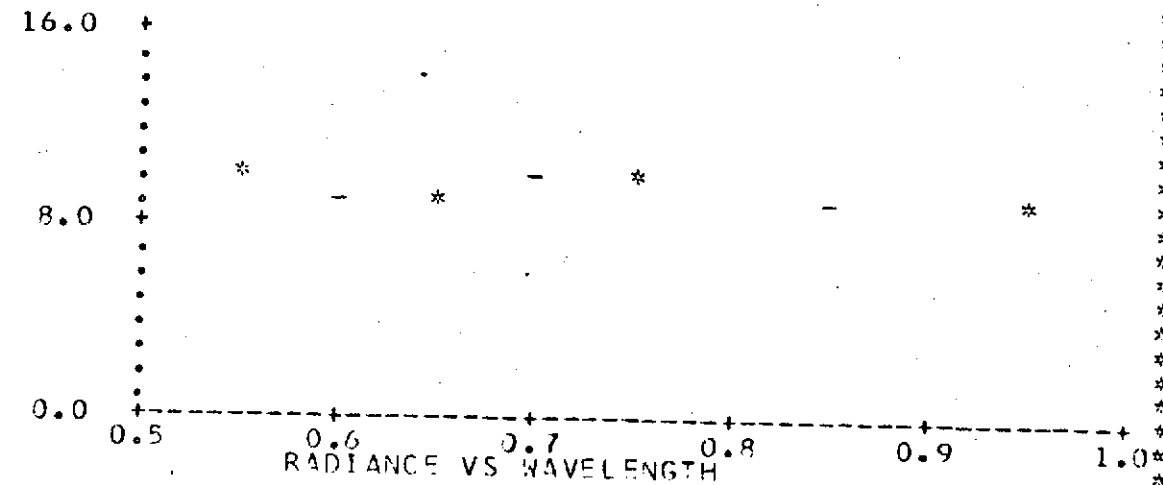
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.27 | 2.39 | .5 - .6 |
| BAND 5 | 9.03 | 2.77 | .6 - .7 |
| BAND 6 | 10.29 | 0.90 | .7 - .8 |
| BAND 7 | 9.38 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.986 | 0.916 | -0.331 |
| BAND 5 | 0.986 | 1.000 | 0.914 | -0.308 |
| BAND 6 | 0.916 | 0.914 | 1.000 | -0.040 |
| BAND 7 | -0.331 | -0.308 | -0.040 | 1.000 |

BAND RATIO PARAMETER 0.019
TRANSFORMED PARAMETER 0.720



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 P1
IMAGE IDENTIFIER: 1411-17415
DATE ACQUIRED: 07SEP73

CELLS 2209 TO 2224
LINES 1215 TO 1223
TOTAL POINTS 128

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

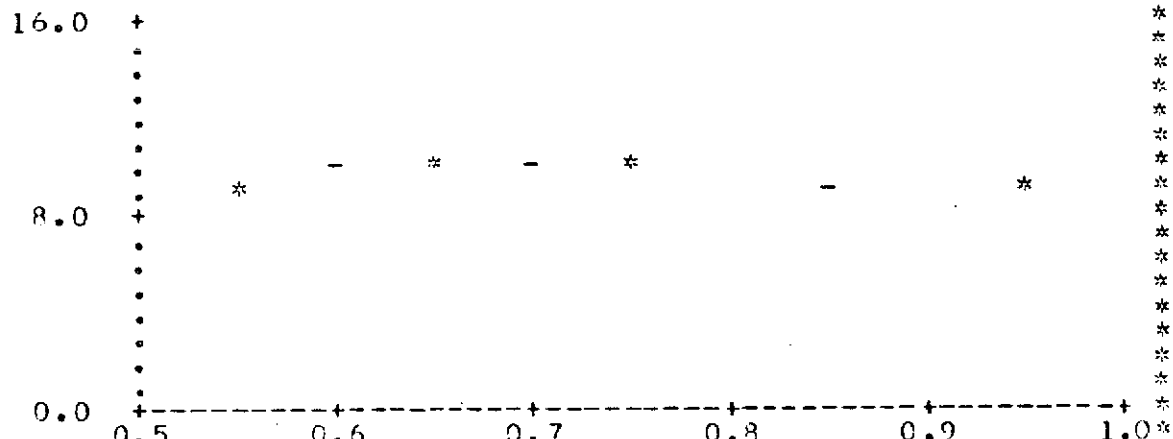
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.45 | 0.94 | .5 - .6 |
| BAND 5 | 10.27 | 1.60 | .6 - .7 |
| BAND 6 | 9.95 | 1.07 | .7 - .8 |
| BAND 7 | 8.58 | 1.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.908 | 0.418 | -0.036 |
| BAND 5 | 0.908 | 1.000 | 0.183 | -0.295 |
| BAND 6 | 0.418 | 0.183 | 1.000 | 0.841 |
| BAND 7 | -0.036 | -0.295 | 0.841 | 1.000 |

BAND RATIO PARAMETER -0.090
TRANSFORMED PARAMETER 0.641




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 R2
IMAGE IDENTIFIER: 1411-17415
DATE ACQUIRED: 07SEP73

CELLS 2079 TO 2098
LINES 1228 TO 1242
TOTAL POINTS 300

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

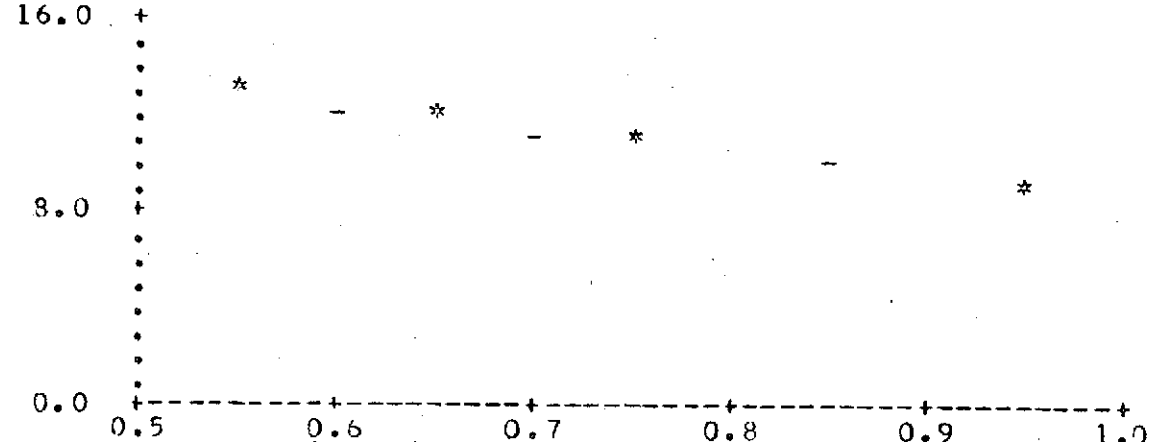
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.15 | 1.76 | .5 - .6 |
| BAND 5 | 12.13 | 1.71 | .6 - .7 |
| BAND 6 | 10.60 | 1.29 | .7 - .8 |
| BAND 7 | 8.70 | 0.92 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.964 | 0.944 | 0.894 |
| BAND 5 | 0.964 | 1.000 | 0.949 | 0.919 |
| BAND 6 | 0.944 | 0.949 | 1.000 | 0.944 |
| BAND 7 | 0.894 | 0.919 | 0.944 | 1.000 |

BAND RATIO PARAMETER -0.164
TRANSFORMED PARAMETER 0.579




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 5 W
IMAGE IDENTIFIER: 1411-17415
DATE ACQUIRED: 07SEP73

CELLS 2199 TO 2206
LINES 1233 TO 1240
TOTAL POINTS 64

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

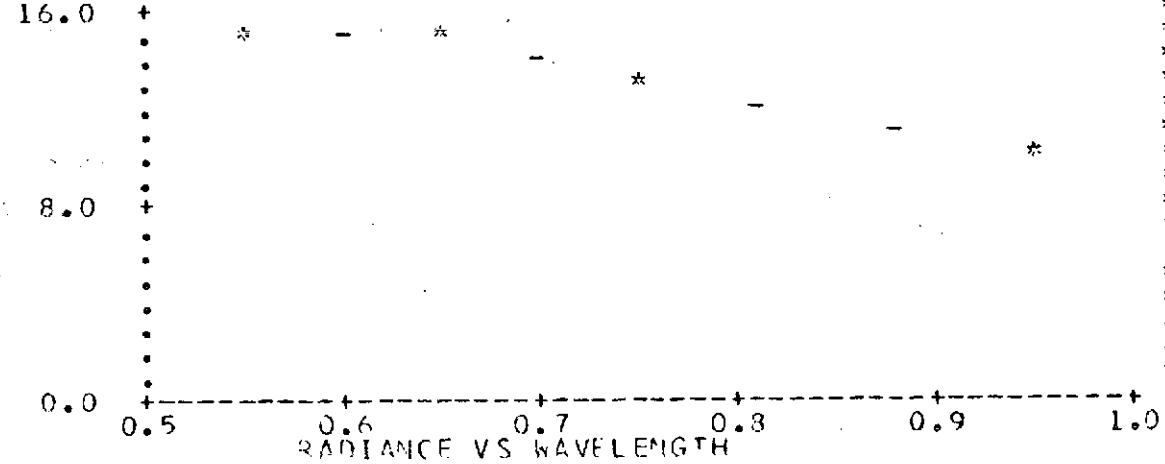
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 14.82 | 1.71 | .5 - .6 |
| BAND 5 | 14.96 | 1.96 | .6 - .7 |
| BAND 6 | 12.90 | 1.58 | .7 - .8 |
| BAND 7 | 10.29 | 1.21 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.962 | 0.948 | 0.936 |
| BAND 5 | 0.962 | 1.000 | 0.945 | 0.947 |
| BAND 6 | 0.948 | 0.945 | 1.000 | 0.955 |
| BAND 7 | 0.936 | 0.947 | 0.955 | 1.000 |

BAND RATIO PARAMETER -0.185
TRANSFORMED PARAMETER 0.561



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1069-17425
DATE ACQUIRED: 30SEP72

CELLS 2075 TO 2081
LINES 1859 TO 1864
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 43 DEGREES***

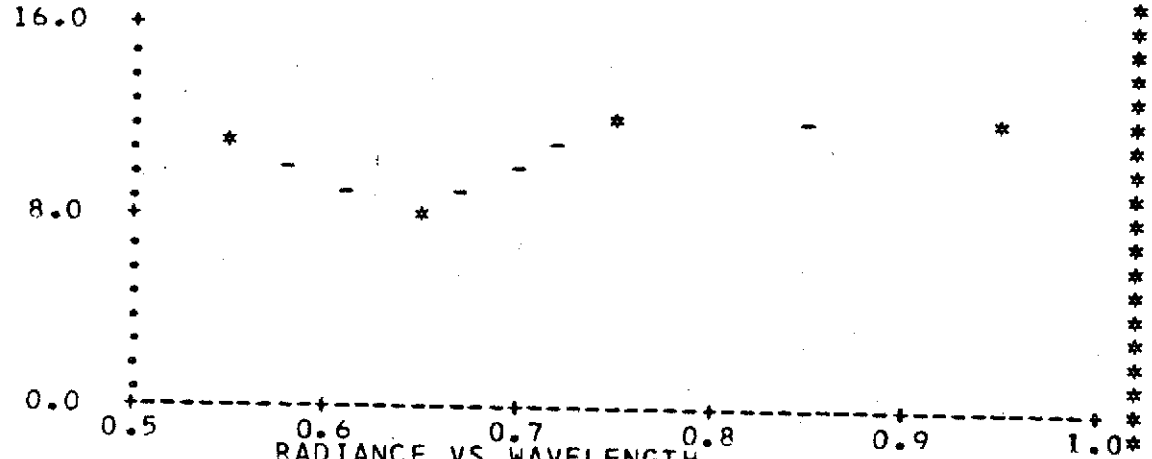
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.54 | 0.58 | .5 - .6 |
| BAND 5 | 7.90 | 0.74 | .6 - .7 |
| BAND 6 | 12.20 | 0.94 | .7 - .8 |
| BAND 7 | 11.76 | 1.08 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.676 | -0.477 | -0.561 |
| BAND 5 | 0.676 | 1.000 | -0.402 | -0.547 |
| BAND 6 | -0.477 | -0.402 | 1.000 | 0.887 |
| BAND 7 | -0.561 | -0.547 | 0.887 | 1.000 |

BAND RATIO PARAMETER 0.196
TRANSFORMED PARAMETER 0.834



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13AUG73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1069-17425
DATE ACQUIRED: 30SEP72

CELLS 2025 TO 2048
LINES 1850 TO 1858
TOTAL POINTS 216

***CORRECTED FOR SUN ELEVATION 43 DEGREES***

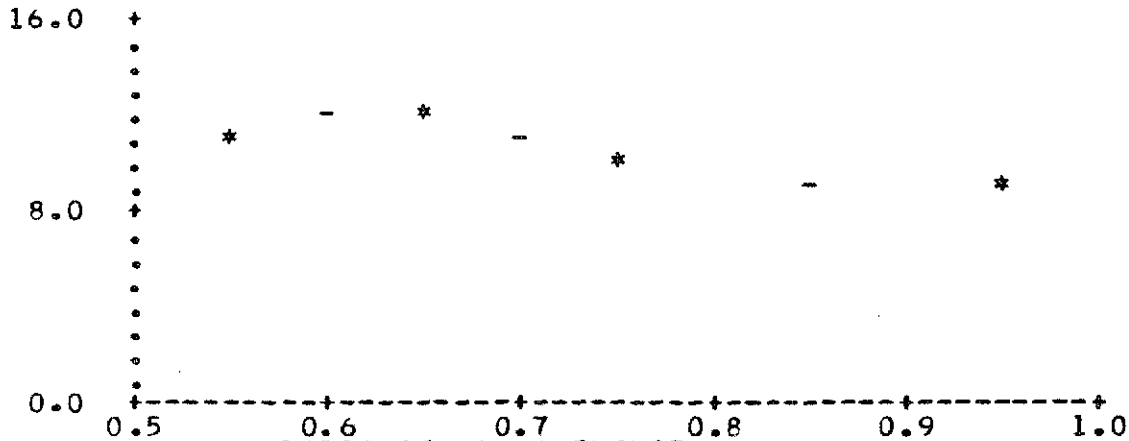
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.38 | 0.63 | .5 - .6 |
| BAND 5 | 11.65 | 0.76 | .6 - .7 |
| BAND 6 | 10.42 | 0.67 | .7 - .8 |
| BAND 7 | 8.66 | 0.56 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.709 | 0.670 | 0.732 |
| BAND 5 | 0.709 | 1.000 | 0.743 | 0.804 |
| BAND 6 | 0.670 | 0.743 | 1.000 | 0.844 |
| BAND 7 | 0.732 | 0.804 | 0.844 | 1.000 |

BAND RATIO PARAMETER -0.148
TRANSFORMED PARAMETER 0.594




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1069-17425
DATE ACQUIRED: 30SEP72

CELLS 2055 TO 2059
LINES 1850 TO 1853
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 43 DEGREES***

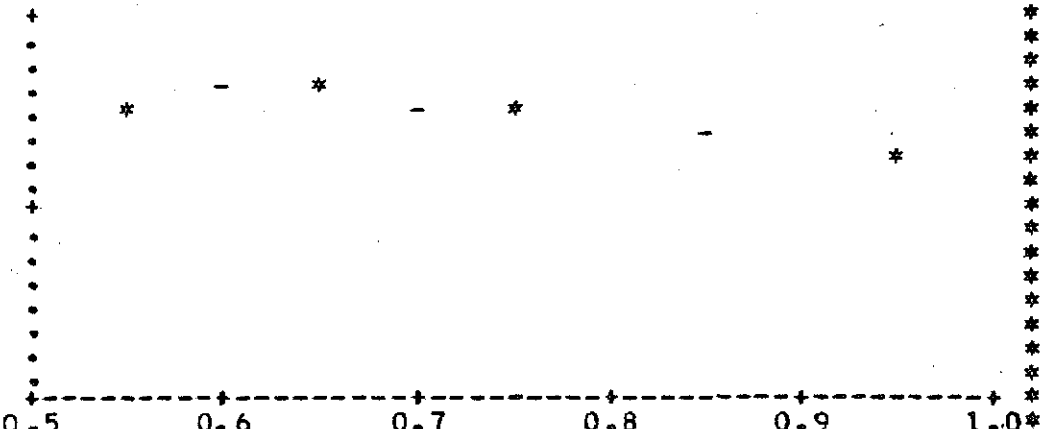
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.03 | 0.96 | .5 - .6 |
| BAND 5 | 13.19 | 1.97 | .6 - .7 |
| BAND 6 | 12.01 | 1.45 | .7 - .8 |
| BAND 7 | 9.85 | 1.11 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.946 | 0.919 | 0.920 |
| BAND 5 | 0.946 | 1.000 | 0.945 | 0.930 |
| BAND 6 | 0.919 | 0.945 | 1.000 | 0.955 |
| BAND 7 | 0.920 | 0.930 | 0.955 | 1.000 |

BAND RATIO PARAMETER -0.145
TRANSFORMED PARAMETER 0.596




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1267-17440
DATE ACQUIRED: 16APR73

CELLS 2545 TO 2550
LINES 1904 TO 1908
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 53 DEGREES***

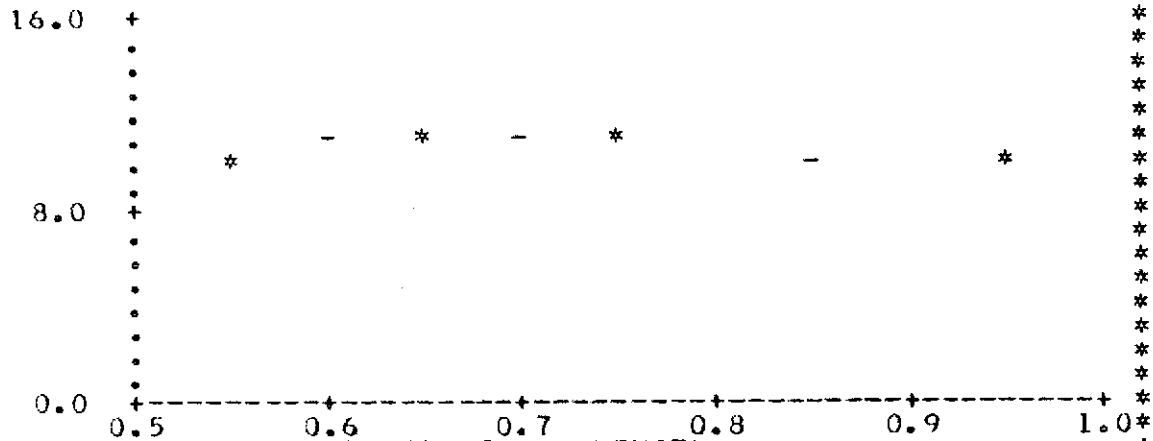
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.86 | 1.05 | .5 - .6 |
| BAND 5 | 11.00 | 1.85 | .6 - .7 |
| BAND 6 | 11.15 | 1.27 | .7 - .8 |
| BAND 7 | 9.63 | 0.85 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.946 | 0.767 | 0.577 |
| BAND 5 | 0.946 | 1.000 | 0.818 | 0.618 |
| BAND 6 | 0.767 | 0.818 | 1.000 | 0.879 |
| BAND 7 | 0.577 | 0.618 | 0.879 | 1.000 |

BAND RATIO PARAMETER -0.066
TRANSFORMED PARAMETER 0.659




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1267-17440
DATE ACQUIRED: 16APR73

CELLS 2495 TO 2516
LINES 1904 TO 903
TOTAL POINTS 22

***CORRECTED FOR SUN ELEVATION 53 DEGREES***

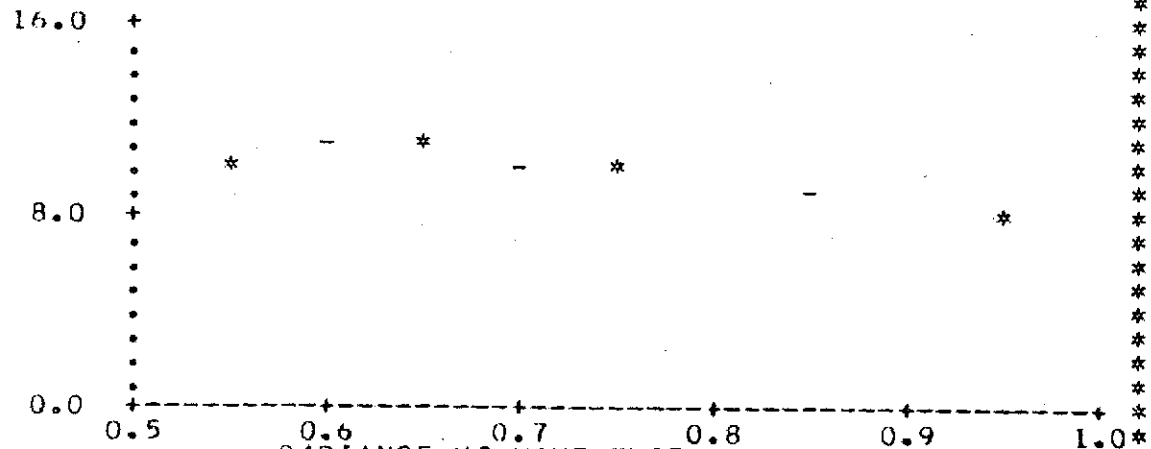
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.71 | 0.25 | .5 - .6 |
| BAND 5 | 10.52 | 0.43 | .6 - .7 |
| BAND 6 | 9.69 | 0.43 | .7 - .8 |
| BAND 7 | 8.07 | 0.31 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.450 | 0.097 | -0.079 |
| BAND 5 | 0.450 | 1.000 | 0.426 | 0.448 |
| BAND 6 | 0.097 | 0.426 | 1.000 | 0.659 |
| BAND 7 | -0.079 | 0.448 | 0.659 | 1.000 |

BAND RATIO PARAMETER -0.132
TRANSFORMED PARAMETER 0.607



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1267-17440
DATE ACQUIRED: 16APR73

CELLS 2525 TO 2528
LINES 1904 TO 1908
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 53 DEGREES***

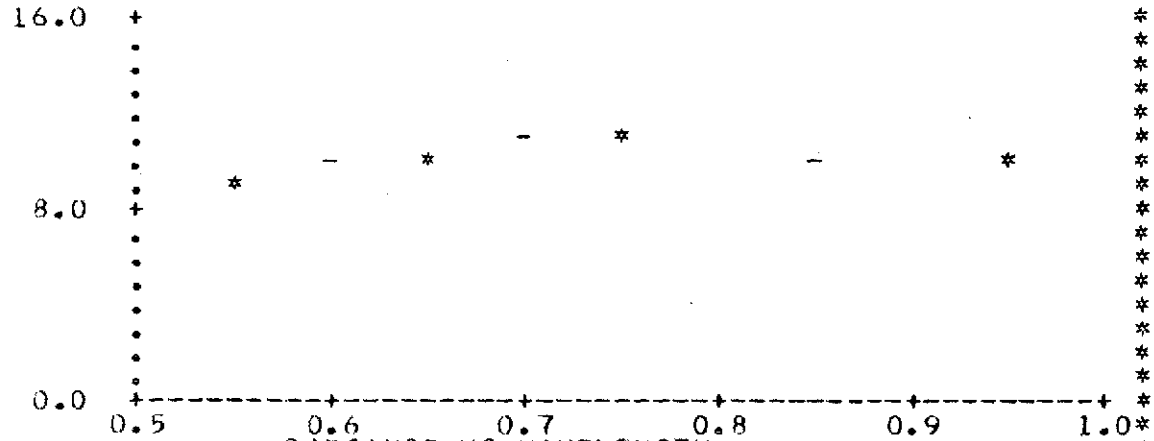
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.13 | 0.46 | .5 - .6 |
| BAND 5 | 9.57 | 1.05 | .6 - .7 |
| BAND 6 | 10.72 | 1.33 | .7 - .8 |
| BAND 7 | 9.56 | 1.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.824 | 0.833 | 0.834 |
| BAND 5 | 0.824 | 1.000 | 0.839 | 0.845 |
| BAND 6 | 0.833 | 0.839 | 1.000 | 0.978 |
| BAND 7 | 0.834 | 0.845 | 0.978 | 1.000 |

BAND RATIO PARAMETER -0.001
TRANSFORMED PARAMETER 0.707



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1303-17435
DATE ACQUIRED: 22MAY73

CELLS 2505 TO 2509
LINES 1849 TO 1854
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

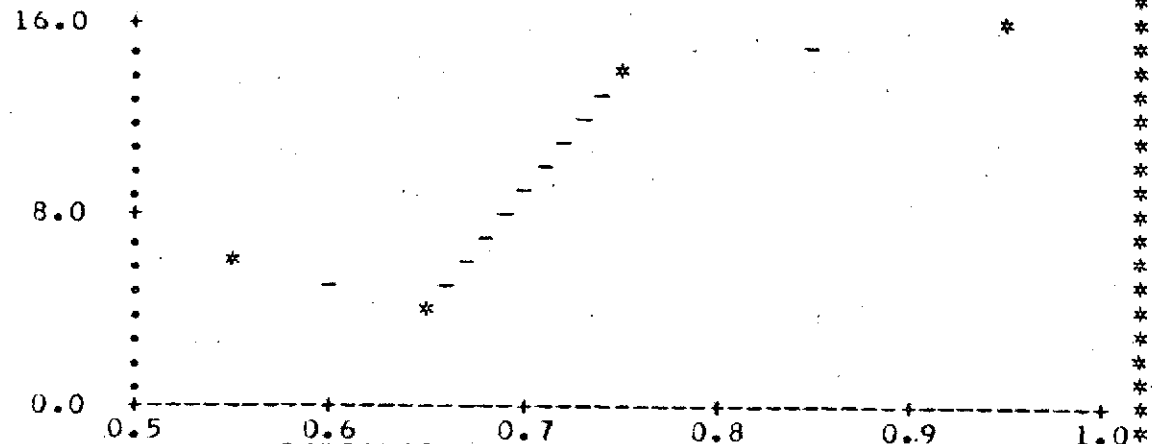
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.31 | 0.72 | .5 - .6 |
| BAND 5 | 3.61 | 1.41 | .6 - .7 |
| BAND 6 | 14.07 | 1.51 | .7 - .8 |
| BAND 7 | 15.74 | 2.14 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.960 | -0.692 | -0.839 |
| BAND 5 | 0.960 | 1.000 | -0.718 | -0.873 |
| BAND 6 | -0.692 | -0.718 | 1.000 | 0.928 |
| BAND 7 | -0.839 | -0.873 | 0.928 | 1.000 |

BAND RATIO PARAMETER 0.627
TRANSFORMED PARAMETER 1.062



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1303-17435
DATE ACQUIRED: 22MAY73

CELLS 2455 TO 2478
LINES 1840 TO 1849
TOTAL POINTS 240

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

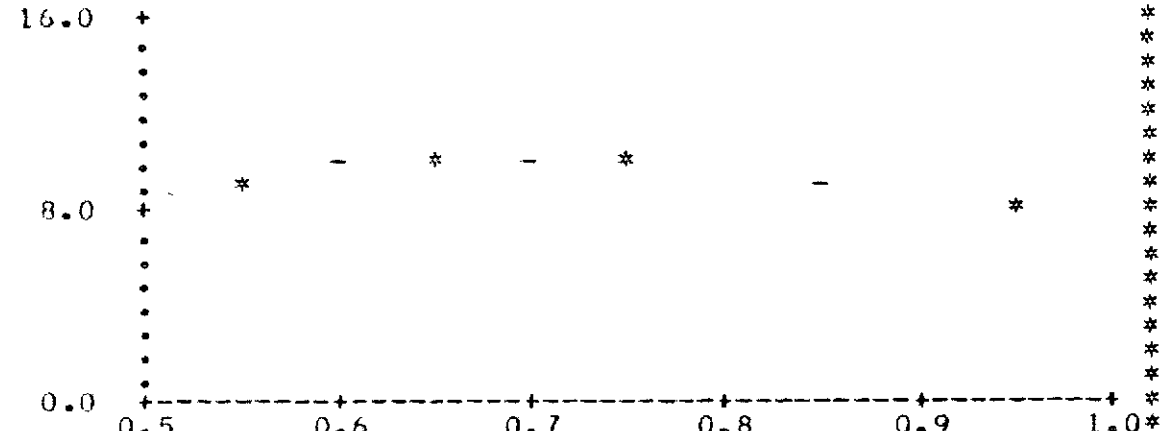
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.96 | 0.40 | .5 - .6 |
| BAND 5 | 9.82 | 0.56 | .6 - .7 |
| BAND 6 | 9.51 | 0.46 | .7 - .8 |
| BAND 7 | 8.16 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.583 | 0.388 | 0.419 |
| BAND 5 | 0.583 | 1.000 | 0.634 | 0.572 |
| BAND 6 | 0.388 | 0.634 | 1.000 | 0.743 |
| BAND 7 | 0.419 | 0.572 | 0.743 | 1.000 |

BAND RATIO PARAMETER -0.092
TRANSFORMED PARAMETER 0.638




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1303-17435
DATE ACQUIRED: 22MAY73

CELLS 2487 TO 2490
LINES 1840 TO 1844
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 61 DEGREES***

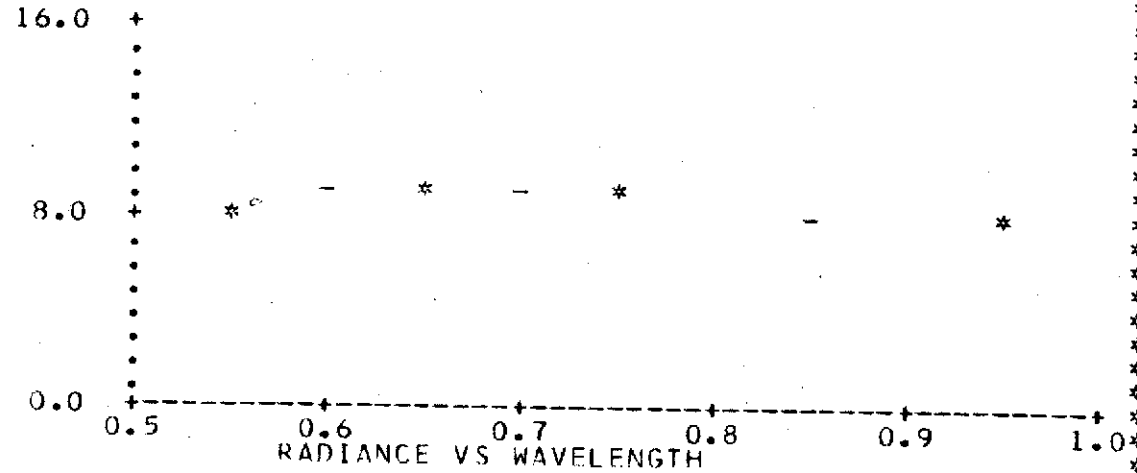
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.27 | 0.61 | .5 - .6 |
| BAND 5 | 8.90 | 1.40 | .6 - .7 |
| BAND 6 | 9.36 | 1.22 | .7 - .8 |
| BAND 7 | 8.19 | 1.06 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.913 | 0.867 | 0.900 |
| BAND 5 | 0.913 | 1.000 | 0.886 | 0.942 |
| BAND 6 | 0.867 | 0.886 | 1.000 | 0.959 |
| BAND 7 | 0.900 | 0.942 | 0.959 | 1.000 |

BAND RATIO PARAMETER -0.042
TRANSFORMED PARAMETER 0.677




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1321-17433
DATE ACQUIRED: 09JUN73

CELLS 2525 TO 2530
LINES 1878 TO 1883
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

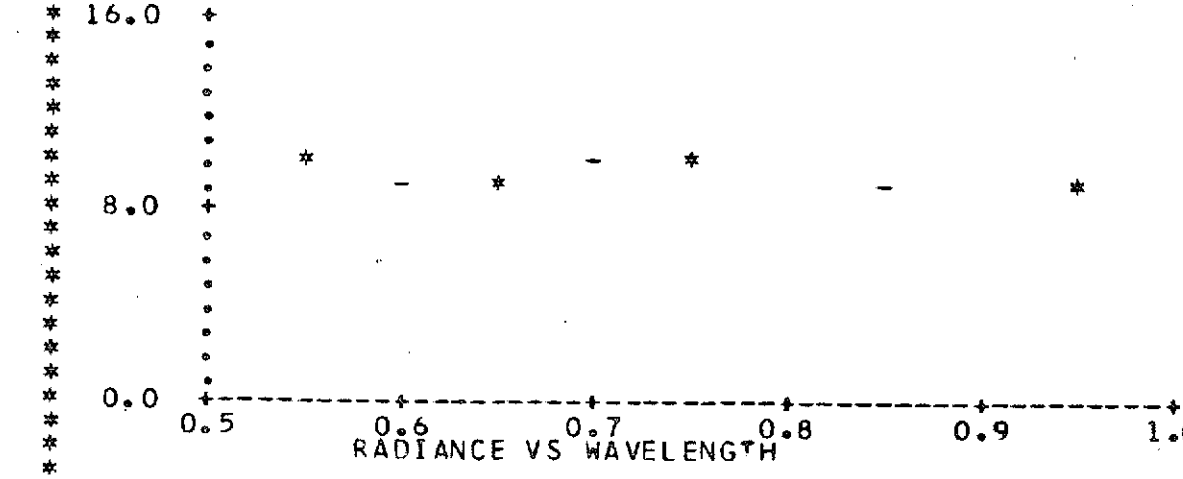
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.59 | 0.28 | .5 - .6 |
| BAND 5 | 8.92 | 0.44 | .6 - .7 |
| BAND 6 | 9.63 | 0.36 | .7 - .8 |
| BAND 7 | 9.05 | 0.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.421 | 0.127 | 0.254 |
| BAND 5 | 0.421 | 1.000 | 0.418 | 0.565 |
| BAND 6 | 0.127 | 0.418 | 1.000 | 0.729 |
| BAND 7 | 0.254 | 0.565 | 0.729 | 1.000 |

BAND RATIO PARAMETER 0.007
TRANSFORMED PARAMETER 0.712



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1321-17433
DATE ACQUIRED: 09JUN73

CELLS 2473 TO 2496
LINES 1868 TO 1876
TOTAL POINTS 216

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

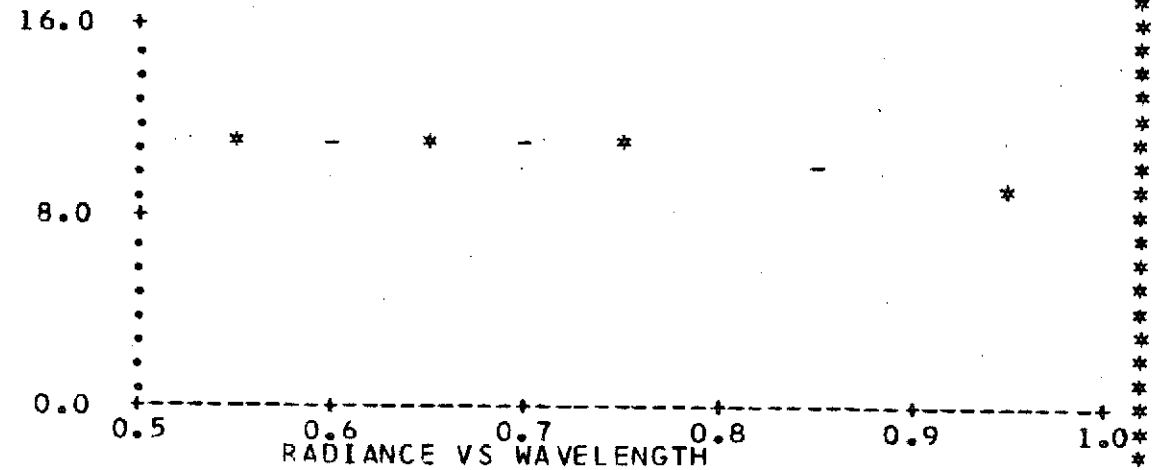
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.09 | 0.42 | .5 - .6 |
| BAND 5 | 11.20 | 0.44 | .6 - .7 |
| BAND 6 | 10.55 | 0.44 | .7 - .8 |
| BAND 7 | 8.98 | 0.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.491 | 0.473 | 0.413 |
| BAND 5 | 0.491 | 1.000 | 0.702 | 0.677 |
| BAND 6 | 0.473 | 0.702 | 1.000 | 0.753 |
| BAND 7 | 0.413 | 0.677 | 0.753 | 1.000 |

BAND RATIO PARAMETER -0.110
TRANSFORMED PARAMETER 0.624



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1321-17433
DATE ACQUIRED: 09JUN73

CELLS 2505 TO 2508
LINES 1868 TO 1872
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 62 DEGREES***

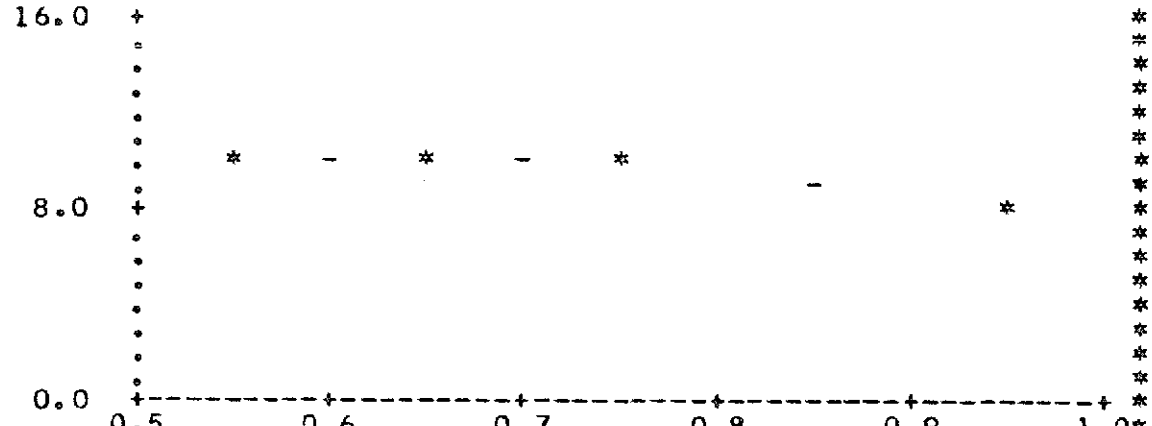
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.12 | 0.62 | .5 - .6 |
| BAND 5 | 9.99 | 1.11 | .6 - .7 |
| BAND 6 | 9.71 | 0.99 | .7 - .8 |
| BAND 7 | 8.38 | 0.91 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.744 | 0.885 | 0.836 |
| BAND 5 | 0.744 | 1.000 | 0.910 | 0.875 |
| BAND 6 | 0.885 | 0.910 | 1.000 | 0.959 |
| BAND 7 | 0.836 | 0.875 | 0.959 | 1.000 |

BAND RATIO PARAMETER -0.088
TRANSFORMED PARAMETER 0.642



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1357-17431
DATE ACQUIRED: 15JUL73

CELLS 2451 TO 2456
LINES 1817 TO 1823
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

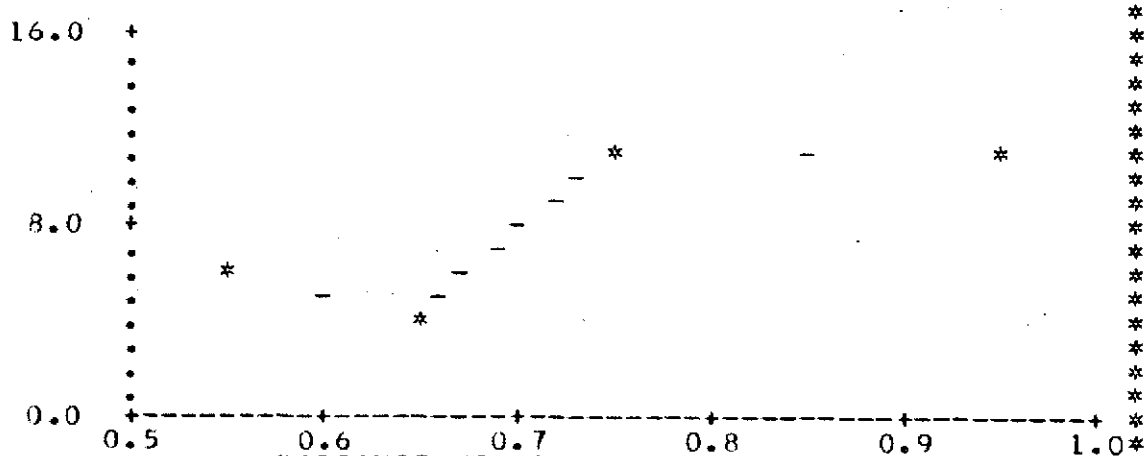
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.21 | 0.51 | .5 - .6 |
| BAND 5 | 4.31 | 0.99 | .6 - .7 |
| BAND 6 | 10.70 | 0.42 | .7 - .8 |
| BAND 7 | 11.36 | 0.77 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.852 | 0.051 | -0.525 |
| BAND 5 | 0.852 | 1.000 | -0.108 | -0.711 |
| BAND 6 | 0.051 | -0.108 | 1.000 | 0.535 |
| BAND 7 | -0.525 | -0.711 | 0.535 | 1.000 |

BAND RATIO PARAMETER 0.450
TRANSFORMED PARAMETER 0.975




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1357-17431
DATE ACQUIRED: 15JUL73

CELLS 2401 TO 2424
LINES 1808 TO 1817
TOTAL POINTS 240

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

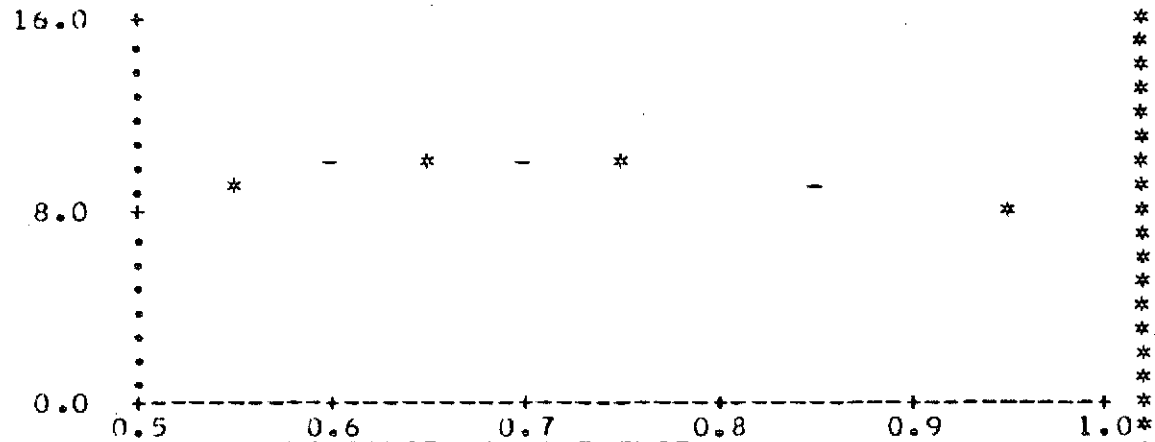
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.29 | 0.43 | .5 - .6 |
| BAND 5 | 10.40 | 0.71 | .6 - .7 |
| BAND 6 | 9.76 | 0.64 | .7 - .8 |
| BAND 7 | 8.14 | 2.92 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.768 | 0.662 | 0.050 |
| BAND 5 | 0.768 | 1.000 | 0.792 | 0.085 |
| BAND 6 | 0.662 | 0.792 | 1.000 | 0.076 |
| BAND 7 | 0.050 | 0.085 | 0.076 | 1.000 |

BAND RATIO PARAMETER -0.122
TRANSFORMED PARAMETER 0.615




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74



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OF POOR QUALITY

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1357-17431
DATE ACQUIRED: 15JUL73

CELLS 2431 TO 2434
LINES 1808 TO 1813
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 60 DEGREES***

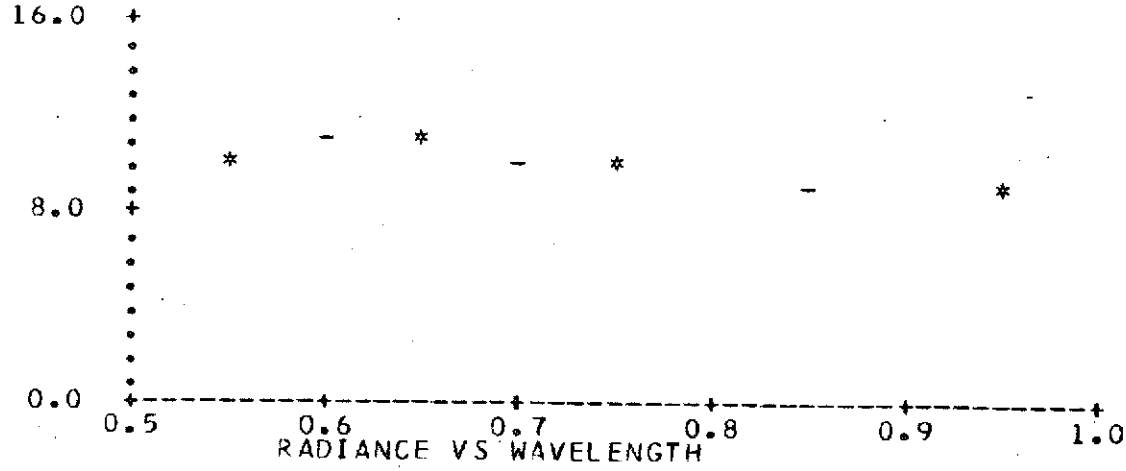
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.03 | 1.81 | .5 - .6 |
| BAND 5 | 11.07 | 2.65 | .6 - .7 |
| BAND 6 | 10.16 | 2.67 | .7 - .8 |
| BAND 7 | 9.24 | 3.26 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.957 | 0.596 | 0.412 |
| BAND 5 | 0.957 | 1.000 | 0.574 | 0.394 |
| BAND 6 | 0.596 | 0.574 | 1.000 | 0.302 |
| BAND 7 | 0.412 | 0.394 | 0.302 | 1.000 |

BAND RATIO PARAMETER -0.090
TRANSFORMED PARAMETER 0.640




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1393-17424
DATE ACQUIRED: 20AUG73

CELLS 2387 TO 2390
LINES 1741 TO 1746
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 54 DEGREES***

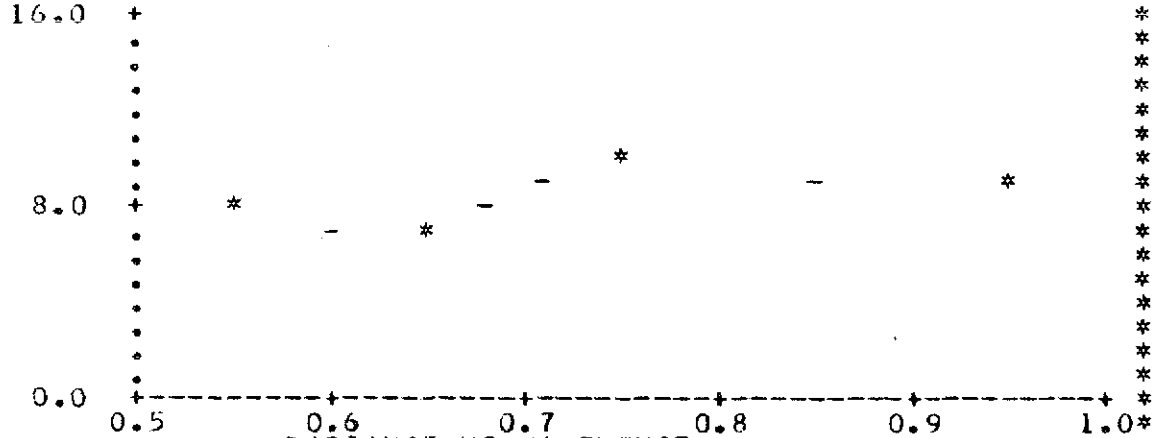
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.93 | 0.71 | .5 - .6 |
| BAND 5 | 7.15 | 1.38 | .6 - .7 |
| BAND 6 | 9.74 | 0.39 | .7 - .8 |
| BAND 7 | 9.16 | 0.58 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.963 | 0.068 | -0.646 |
| BAND 5 | 0.963 | 1.000 | 0.080 | -0.700 |
| BAND 6 | 0.068 | 0.080 | 1.000 | 0.434 |
| BAND 7 | -0.646 | -0.700 | 0.434 | 1.000 |

BAND RATIO PARAMETER 0.123
TRANSFORMED PARAMETER 0.789




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1393-17424
DATE ACQUIRED: 20AUG73

CELLS 2335 TO 2358
LINES 1731 TO 1739
TOTAL POINTS 216

***CORRECTED FOR SUN ELEVATION 54 DEGREES***

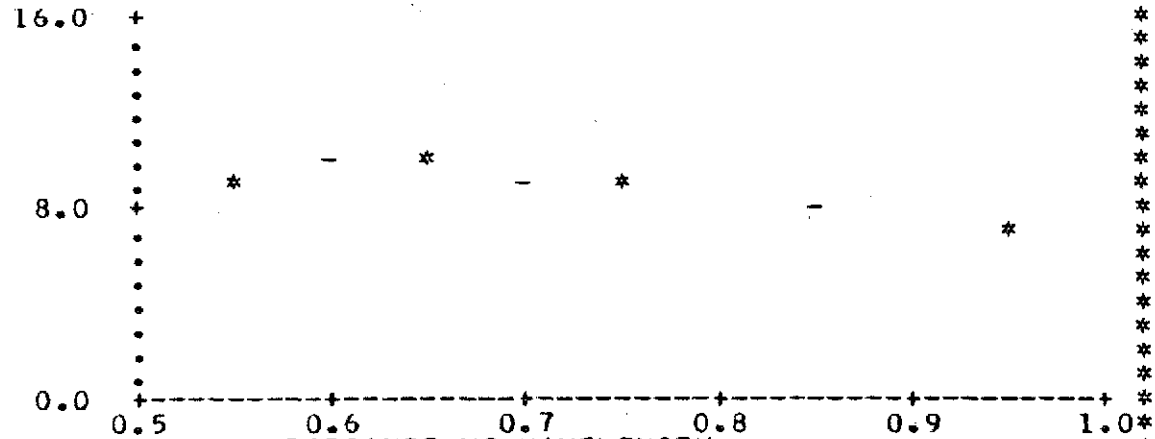
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.09 | 0.22 | .5 - .6 |
| BAND 5 | 9.76 | 0.50 | .6 - .7 |
| BAND 6 | 8.89 | 0.41 | .7 - .8 |
| BAND 7 | 7.32 | 0.38 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.489 | 0.210 | 0.314 |
| BAND 5 | 0.489 | 1.000 | 0.300 | 0.407 |
| BAND 6 | 0.210 | 0.300 | 1.000 | 0.696 |
| BAND 7 | 0.314 | 0.407 | 0.696 | 1.000 |

BAND RATIO PARAMETER -0.143
TRANSFORMED PARAMETER 0.598




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1393-17424
DATE ACQUIRED: 20AUG73

CELLS 2367 TO 2370
LINES 1731 TO 1735
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 54 DEGREES***

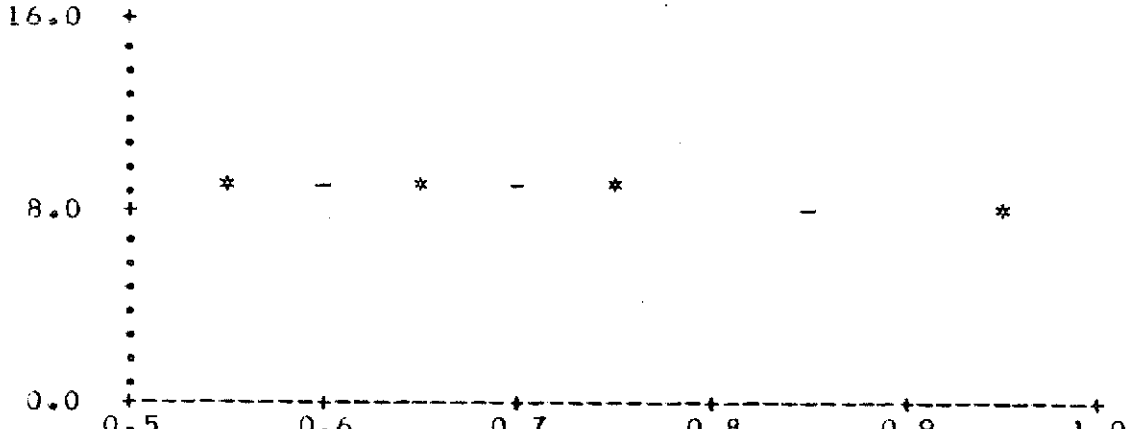
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.16 | 1.11 | .5 - .6 |
| BAND 5 | 9.37 | 1.80 | .6 - .7 |
| BAND 6 | 9.05 | 1.71 | .7 - .8 |
| BAND 7 | 7.58 | 1.68 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.954 | 0.916 | 0.889 |
| BAND 5 | 0.954 | 1.000 | 0.844 | 0.829 |
| BAND 6 | 0.916 | 0.844 | 1.000 | 0.983 |
| BAND 7 | 0.889 | 0.829 | 0.983 | 1.000 |

BAND RATIO PARAMETER -0.106
TRANSFORMED PARAMETER 0.628



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 A
IMAGE IDENTIFIER: 1411-17422
DATE ACQUIRED: 07SEP73

CELLS 2377 TO 2382
LINES 1763 TO 1768
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

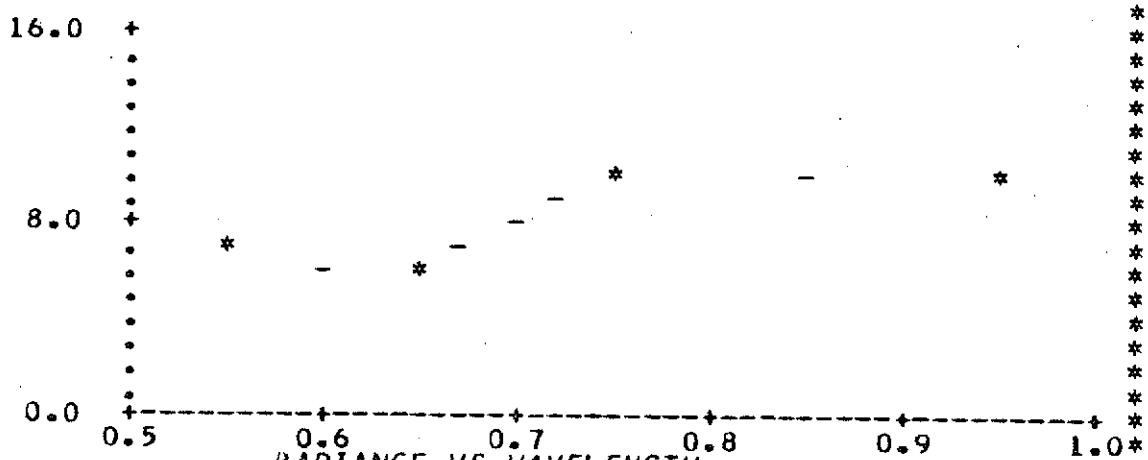
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.22 | 0.71 | .5 - .6 |
| BAND 5 | 5.55 | 1.12 | .6 - .7 |
| BAND 6 | 9.78 | 0.80 | .7 - .8 |
| BAND 7 | 10.07 | 1.27 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.921 | -0.133 | -0.289 |
| BAND 5 | 0.921 | 1.000 | -0.360 | -0.547 |
| BAND 6 | -0.133 | -0.360 | 1.000 | 0.912 |
| BAND 7 | -0.289 | -0.547 | 0.912 | 1.000 |

BAND RATIO PARAMETER 0.289
TRANSFORMED PARAMETER 0.888



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 R
IMAGE IDENTIFIER: 1411-17422
DATE ACQUIRED: 07SEP73

CELLS 2329 TO 2350
LINES 1753 TO 1761
TOTAL POINTS 198

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

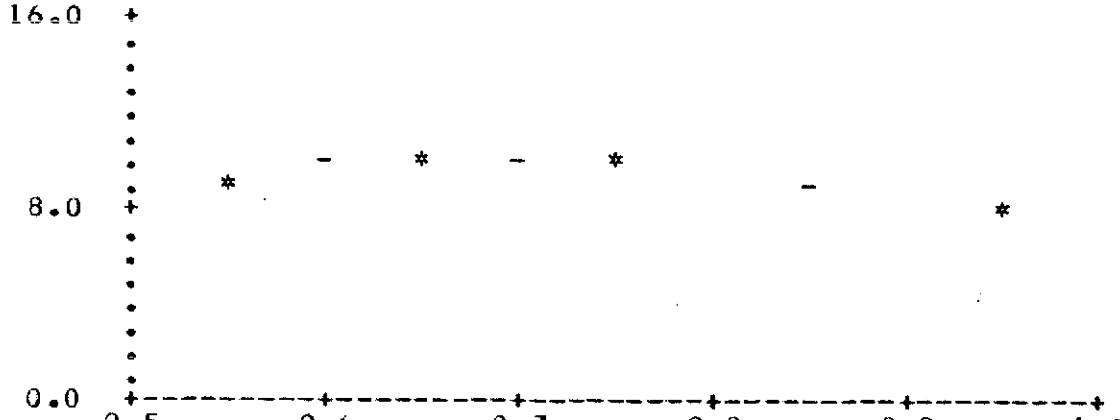
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.32 | 0.34 | .5 - .6 |
| BAND 5 | 10.08 | 0.46 | .6 - .7 |
| BAND 6 | 9.66 | 0.51 | .7 - .8 |
| BAND 7 | 8.33 | 0.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.579 | 0.532 | 0.597 |
| BAND 5 | 0.579 | 1.000 | 0.747 | 0.735 |
| BAND 6 | 0.532 | 0.747 | 1.000 | 0.762 |
| BAND 7 | 0.597 | 0.735 | 0.762 | 1.000 |

BAND RATIO PARAMETER -0.095
TRANSFORMED PARAMETER 0.637




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: RM 6 W
IMAGE IDENTIFIER: 1411-17422
DATE ACQUIRED: 07SEP73

CELLS 2357 TO 2360
LINES 1753 TO 1757
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 49 DEGREES***

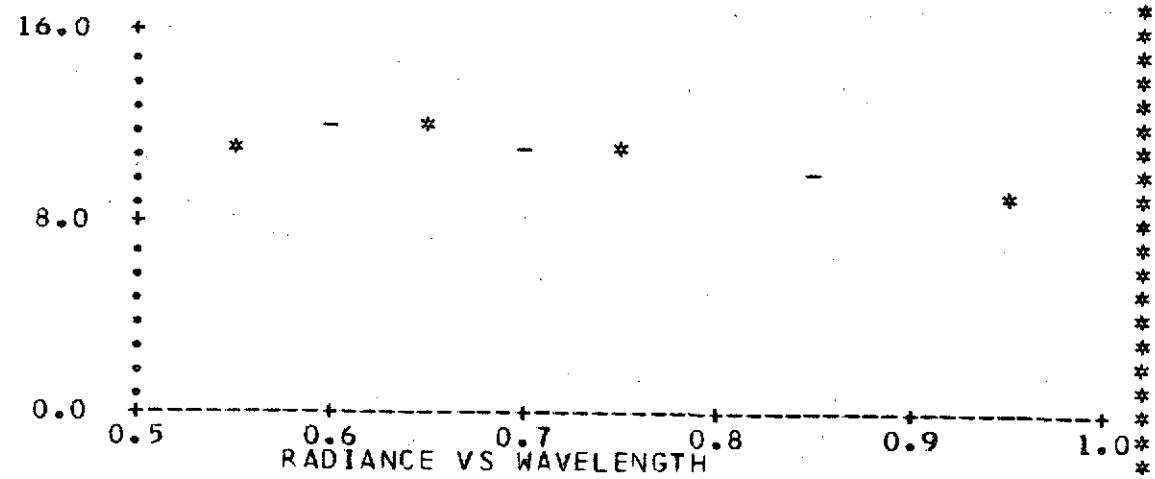
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.73 | 0.82 | .5 - .6 |
| BAND 5 | 12.31 | 1.45 | .6 - .7 |
| BAND 6 | 10.98 | 1.11 | .7 - .8 |
| BAND 7 | 9.12 | 0.86 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.957 | 0.926 | 0.879 |
| BAND 5 | 0.957 | 1.000 | 0.953 | 0.946 |
| BAND 6 | 0.926 | 0.953 | 1.000 | 0.941 |
| BAND 7 | 0.879 | 0.946 | 0.941 | 1.000 |

BAND RATIO PARAMETER -0.149
TRANSFORMED PARAMETER 0.593




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1034-17452
DATE ACQUIRED: 26AUG72

CELLS 2449 TO 2452
LINES 1383 TO 1385
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

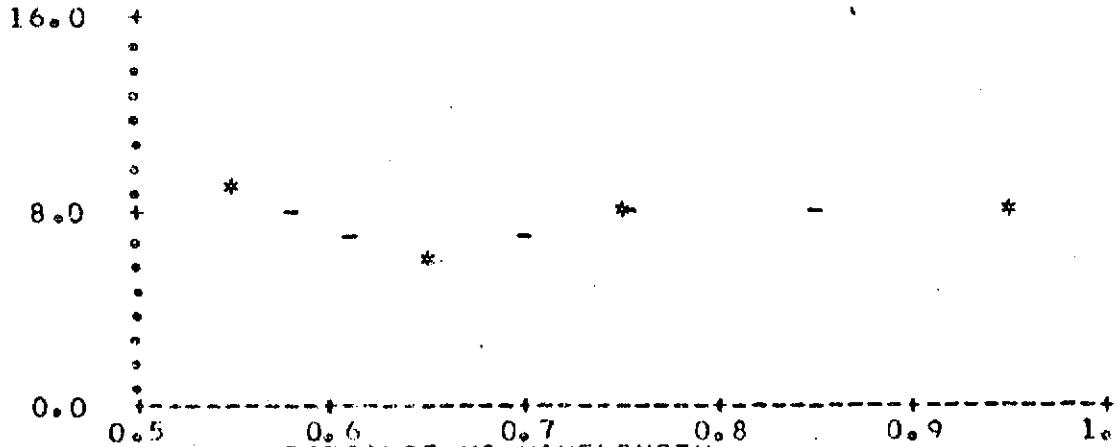
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.91 | 0.38 | .5 - .6 |
| BAND 5 | 5.91 | 0.48 | .6 - .7 |
| BAND 6 | 8.45 | 0.65 | .7 - .8 |
| BAND 7 | 7.93 | 0.58 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.745 | -0.447 | -0.299 |
| BAND 5 | 0.745 | 1.000 | -0.569 | -0.459 |
| BAND 6 | -0.447 | -0.569 | 1.000 | 0.932 |
| BAND 7 | -0.299 | -0.459 | 0.932 | 1.000 |

BAND RATIO PARAMETER 0.146
TRANSFORMED PARAMETER 0.804



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1034-17452
DATE ACQUIRED: 26AUG72

CELLS 2457 TO 2464
LINES 1428 TO 1438
TOTAL POINTS 88

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

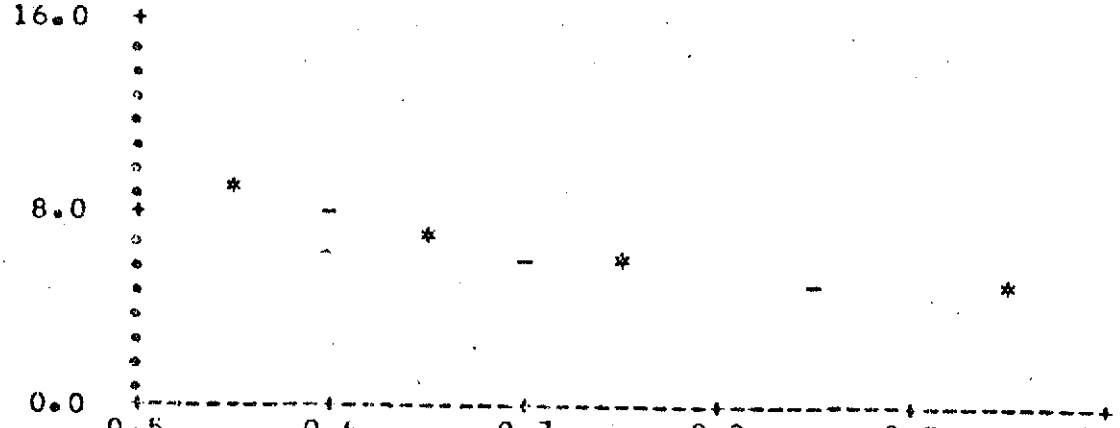
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.01 | 0.50 | .5 - .6 |
| BAND 5 | 6.64 | 0.44 | .6 - .7 |
| BAND 6 | 6.34 | 0.35 | .7 - .8 |
| BAND 7 | 5.31 | 0.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.772 | 0.098 | 0.128 |
| BAND 5 | 0.772 | 1.000 | 0.119 | 0.038 |
| BAND 6 | 0.098 | 0.119 | 1.000 | 0.683 |
| BAND 7 | 0.128 | 0.038 | 0.683 | 1.000 |

BAND RATIO PARAMETER -0.111
TRANSFORMED PARAMETER 0.624




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1034-17452
DATE ACQUIRED: 26AUG72

CELLS 2435 TO 2438
LINES 1386 TO 1392
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

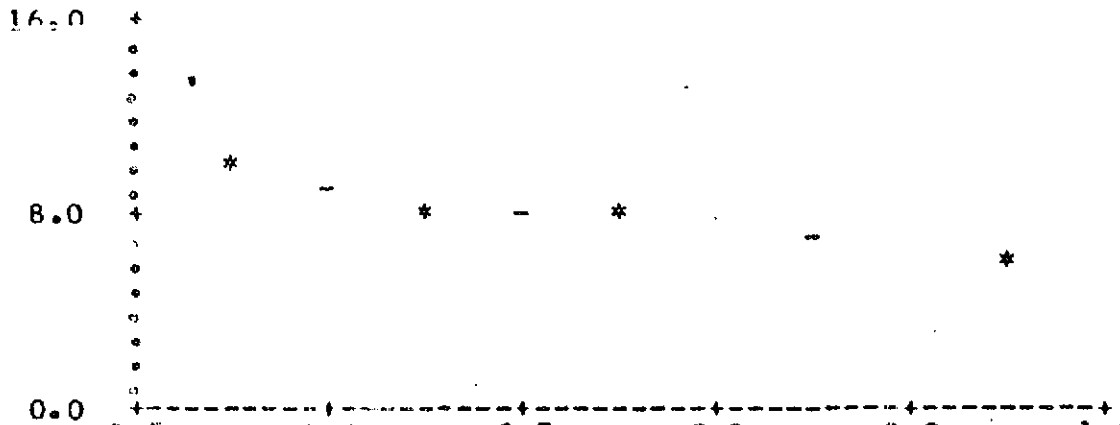
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.09 | 0.48 | .5 - .6 |
| BAND 5 | 7.90 | 0.55 | .6 - .7 |
| BAND 6 | 7.81 | 0.57 | .7 - .8 |
| BAND 7 | 6.48 | 0.36 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.647 | 0.546 | 0.631 |
| BAND 5 | 0.647 | 1.000 | 0.404 | 0.537 |
| BAND 6 | 0.546 | 0.404 | 1.000 | 0.601 |
| BAND 7 | 0.631 | 0.537 | 0.601 | 1.000 |

BAND RATIO PARAMETER -0.099
TRANSFORMED PARAMETER 0.633




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1052-17452
DATE ACQUIRED: 13SEP72

CELLS 2423 TO 2426
LINES 1384 TO 1386
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

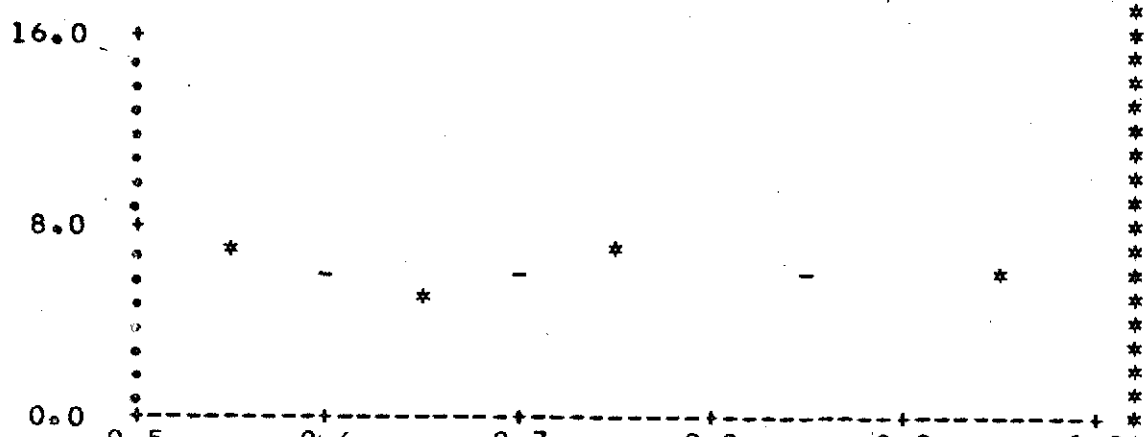
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.16 | 0.74 | .5 - .6 |
| BAND 5 | 4.86 | 0.71 | .6 - .7 |
| BAND 6 | 6.79 | 0.31 | .7 - .8 |
| BAND 7 | 6.49 | 0.55 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.897 | -0.401 | -0.566 |
| BAND 5 | 0.897 | 1.000 | -0.523 | -0.701 |
| BAND 6 | -0.401 | -0.523 | 1.000 | 0.600 |
| BAND 7 | -0.566 | -0.701 | 0.600 | 1.000 |

BAND RATIO PARAMETER 0.143
TRANSFORMED PARAMETER 0.802



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1052-17452
DATE ACQUIRED: 13SEP72

CELLS 2433 TO 2440
LINES 1422 TO 1430
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

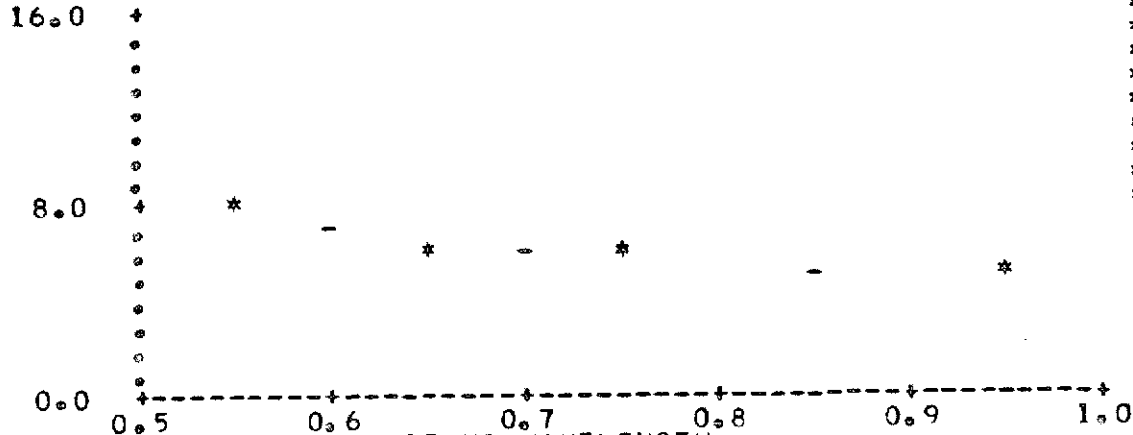
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.13 | 0.37 | .5 - .6 |
| BAND 5 | 5.74 | 0.37 | .6 - .7 |
| BAND 6 | 5.69 | 0.35 | .7 - .8 |
| BAND 7 | 4.83 | 0.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.605 | 0.028 | -0.078 |
| BAND 5 | 0.605 | 1.000 | -0.041 | -0.203 |
| BAND 6 | 0.028 | -0.041 | 1.000 | 0.610 |
| BAND 7 | -0.078 | -0.203 | 0.610 | 1.000 |

BAND RATIO PARAMETER -0.086
TRANSFORMED PARAMETER 0.643




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1052-17452
DATE ACQUIRED: 13SEP72

CELLS 2411 TO 2414
LINES 1387 TO 1393
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

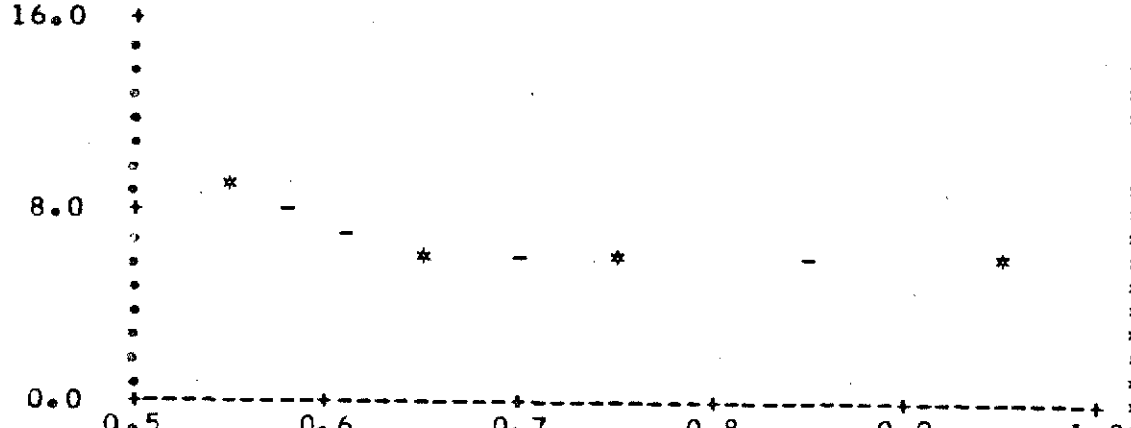
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.71 | 0.42 | .5 - .6 |
| BAND 5 | 6.45 | 0.39 | .6 - .7 |
| BAND 6 | 6.45 | 0.41 | .7 - .8 |
| BAND 7 | 5.69 | 0.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.495 | 0.449 | 0.369 |
| BAND 5 | 0.495 | 1.000 | 0.462 | 0.421 |
| BAND 6 | 0.449 | 0.462 | 1.000 | 0.833 |
| BAND 7 | 0.369 | 0.421 | 0.833 | 1.000 |

BAND RATIO PARAMETER -0.062
TRANSFORMED PARAMETER 0.662




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1232-17463
DATE ACQUIRED: 12MAR73

CELLS 2643 TO 2646
LINES 1530 TO 1533
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

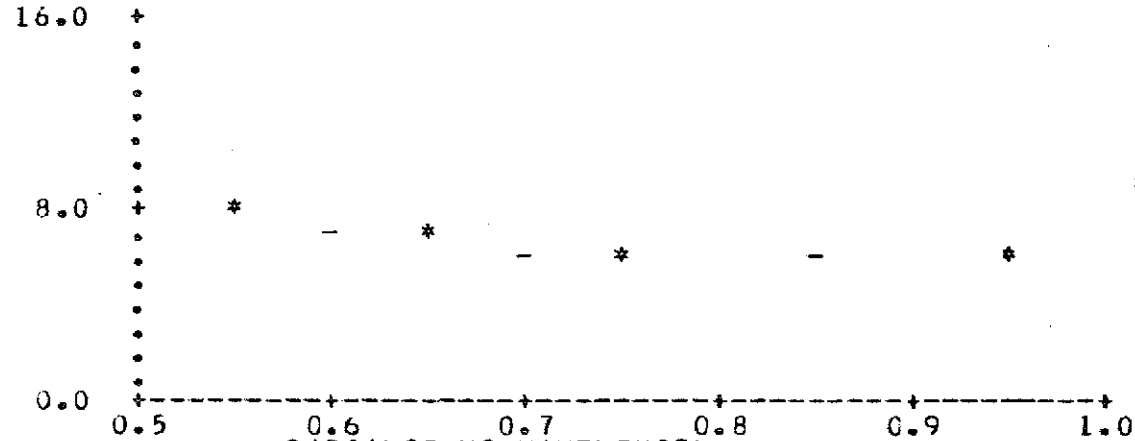
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.45 | 0.75 | .5 - .6 |
| BAND 5 | 6.69 | 0.74 | .6 - .7 |
| BAND 6 | 5.93 | 0.75 | .7 - .8 |
| BAND 7 | 5.52 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.908 | 0.840 | 0.849 |
| BAND 5 | 0.908 | 1.000 | 0.965 | 0.893 |
| BAND 6 | 0.840 | 0.965 | 1.000 | 0.866 |
| BAND 7 | 0.849 | 0.893 | 0.866 | 1.000 |

BAND RATIO PARAMETER -0.096
TRANSFORMED PARAMETER 0.636




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 26SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1232-17463
DATE ACQUIRED: 12MAR73

CELLS 2651 TO 2658
LINES 1576 TO 1585
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

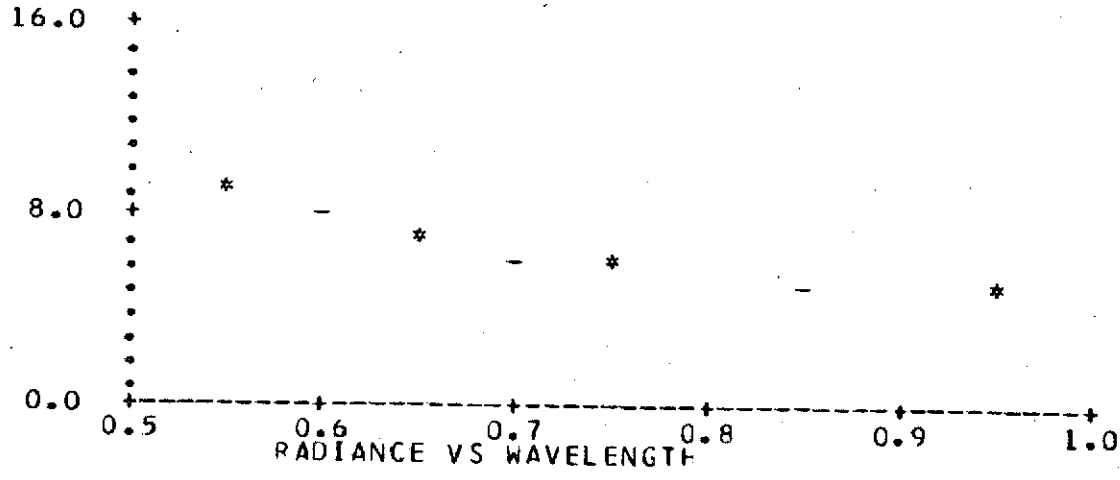
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.79 | 0.59 | .5 - .6 |
| BAND 5 | 6.57 | 0.48 | .6 - .7 |
| BAND 6 | 5.56 | 0.49 | .7 - .8 |
| BAND 7 | 4.82 | 0.38 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.616 | 0.564 | 0.541 |
| BAND 5 | 0.616 | 1.000 | 0.770 | 0.732 |
| BAND 6 | 0.564 | 0.770 | 1.000 | 0.681 |
| BAND 7 | 0.541 | 0.732 | 0.681 | 1.000 |

BAND RATIO PARAMETER -0.154
TRANSFORMED PARAMETER 0.588




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 26SEP73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1232-17463
DATE ACQUIRED: 12MAR73

CELLS 2631 TO 2634
LINES 1534 TO 1541
TOTAL PCINTS 32

***CORRECTED FOR SUN ELEVATION 33 DEGREES***

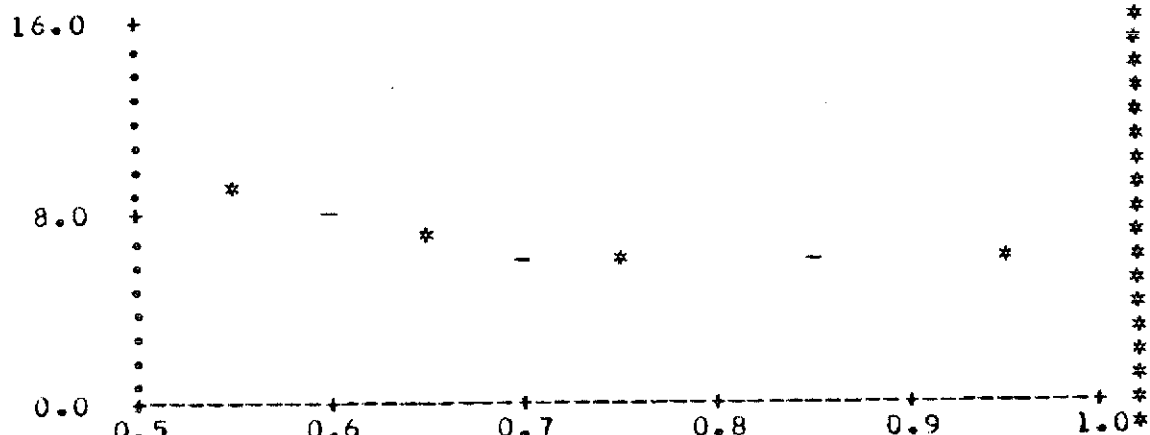
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.24 | 0.43 | .5 - .6 |
| BAND 5 | 7.12 | 0.46 | .6 - .7 |
| BAND 6 | 6.29 | 0.45 | .7 - .8 |
| BAND 7 | 5.55 | 0.47 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.622 | 0.703 | 0.715 |
| BAND 5 | 0.622 | 1.000 | 0.685 | 0.660 |
| BAND 6 | 0.703 | 0.685 | 1.000 | 0.778 |
| BAND 7 | 0.715 | 0.660 | 0.778 | 1.000 |

BAND RATIO PARAMETER -0.124
TRANSFORMED PARAMETER 0.613



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 26SEP73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1249-17405
DATE ACQUIRED: 29MAR73

CELLS 991 TO 994
LINES 1808 TO 1811
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 39 DEGREES***

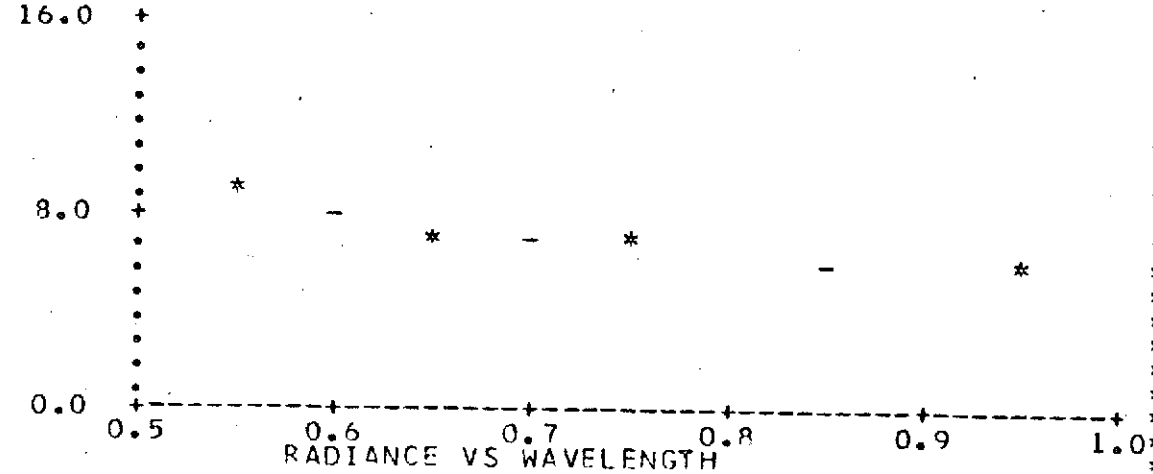
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.12 | 0.75 | .5 - .6 |
| BAND 5 | 7.01 | 0.86 | .6 - .7 |
| BAND 6 | 6.68 | 0.71 | .7 - .8 |
| BAND 7 | 6.01 | 0.77 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.917 | 0.784 | 0.795 |
| BAND 5 | 0.917 | 1.000 | 0.841 | 0.886 |
| BAND 6 | 0.784 | 0.841 | 1.000 | 0.949 |
| BAND 7 | 0.795 | 0.886 | 0.949 | 1.000 |

BAND RATIO PARAMETER -0.077
TRANSFORMED PARAMETER 0.650




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

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OF POOR QUALITY

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 P
IMAGE IDENTIFIER: 1249-17405
DATE ACQUIRED: 29MAR73

CELLS 999 TO 1006
LINES 1855 TO 1865
TOTAL POINTS 88

***CORRECTED FOR SUN ELEVATION 39 DEGREES***

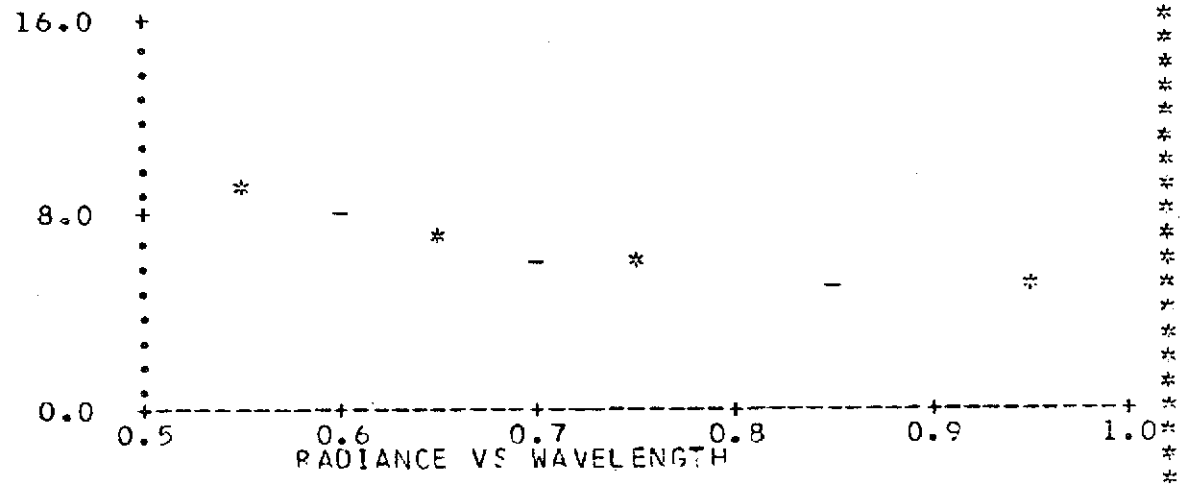
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.33 | 0.47 | .5 - .6 |
| BAND 5 | 7.08 | 0.48 | .6 - .7 |
| BAND 6 | 6.13 | 0.38 | .7 - .8 |
| BAND 7 | 5.18 | 0.35 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.707 | 0.589 | 0.498 |
| BAND 5 | 0.707 | 1.000 | 0.617 | 0.769 |
| BAND 6 | 0.589 | 0.617 | 1.000 | 0.517 |
| BAND 7 | 0.498 | 0.769 | 0.517 | 1.000 |

BAND RATIO PARAMETER -0.155
TRANSFORMED PARAMETER 0.588




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1249-17405
DATE ACQUIRED: 29MAR73

CELLS 979 TO 982
LINES 1813 TO 1820
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 39 DEGREES***

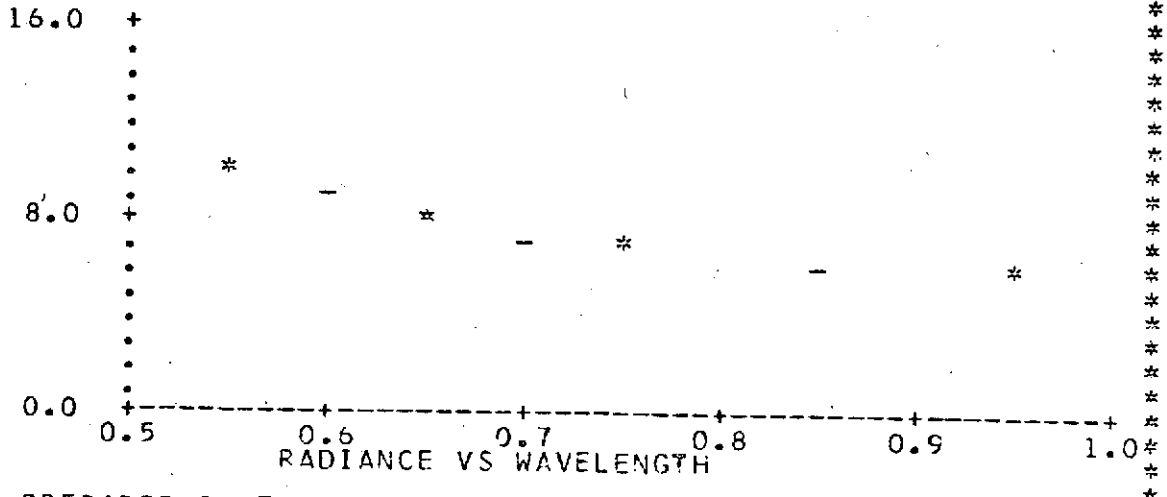
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.64 | 0.51 | .5 - .6 |
| BAND 5 | 7.62 | 0.50 | .6 - .7 |
| BAND 6 | 6.72 | 0.46 | .7 - .8 |
| BAND 7 | 5.97 | 0.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.682 | 0.594 | 0.433 |
| BAND 5 | 0.682 | 1.000 | 0.774 | 0.662 |
| BAND 6 | 0.594 | 0.774 | 1.000 | 0.714 |
| BAND 7 | 0.433 | 0.662 | 0.714 | 1.000 |

BAND RATIO PARAMETER -0.122
TRANSFORMED PARAMETER 0.615




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DATA ANALYSIS LABORATORY 14MAY74

ORIGINAL PAGE IS
OF POOR QUALITY

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1250-17463
DATE ACQUIRED: 30MAR73

CELLS 2725 TO 2728
LINES 1532 TO 1535
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

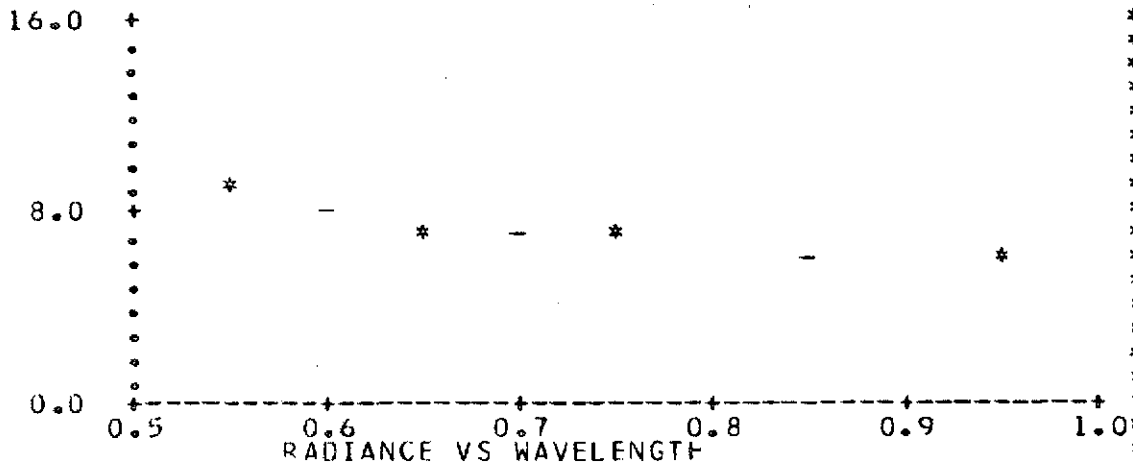
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.11 | 0.87 | .5 - .6 |
| BAND 5 | 7.17 | 0.72 | .6 - .7 |
| BAND 6 | 6.54 | 0.69 | .7 - .8 |
| BAND 7 | 6.12 | 0.57 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.910 | 0.809 | 0.741 |
| BAND 5 | 0.910 | 1.000 | 0.864 | 0.882 |
| BAND 6 | 0.809 | 0.864 | 1.000 | 0.762 |
| BAND 7 | 0.741 | 0.882 | 0.762 | 1.000 |

BAND RATIO PARAMETER -0.079
TRANSFORMED PARAMETER 0.649




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 26SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1250-17463
DATE ACQUIRED: 30MAR73

CELLS 2733 TO 2740
LINES 1577 TO 1586
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

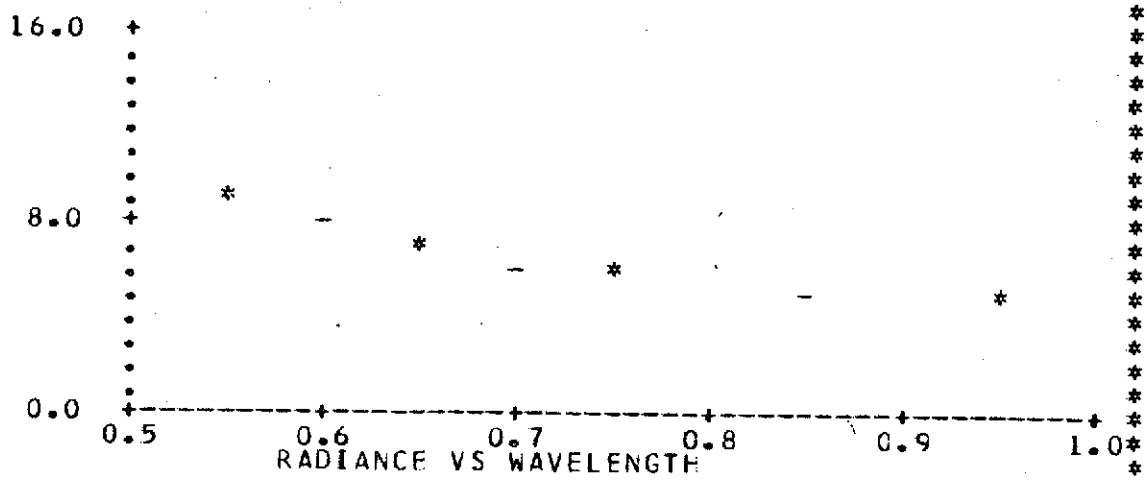
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.92 | 0.54 | .5 - .6 |
| BAND 5 | 6.76 | 0.39 | .6 - .7 |
| BAND 6 | 5.72 | 0.37 | .7 - .8 |
| BAND 7 | 4.95 | 0.38 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.695 | 0.723 | 0.588 |
| BAND 5 | 0.695 | 1.000 | 0.674 | 0.691 |
| BAND 6 | 0.723 | 0.674 | 1.000 | 0.713 |
| BAND 7 | 0.588 | 0.691 | 0.713 | 1.000 |

BAND RATIO PARAMETER -0.154
TRANSFORMED PARAMETER 0.588




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 26SEP73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1250-17463
DATE ACQUIRED: 30MAR73

CELLS 2713 TO 2716
LINES 1536 TO 1543
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

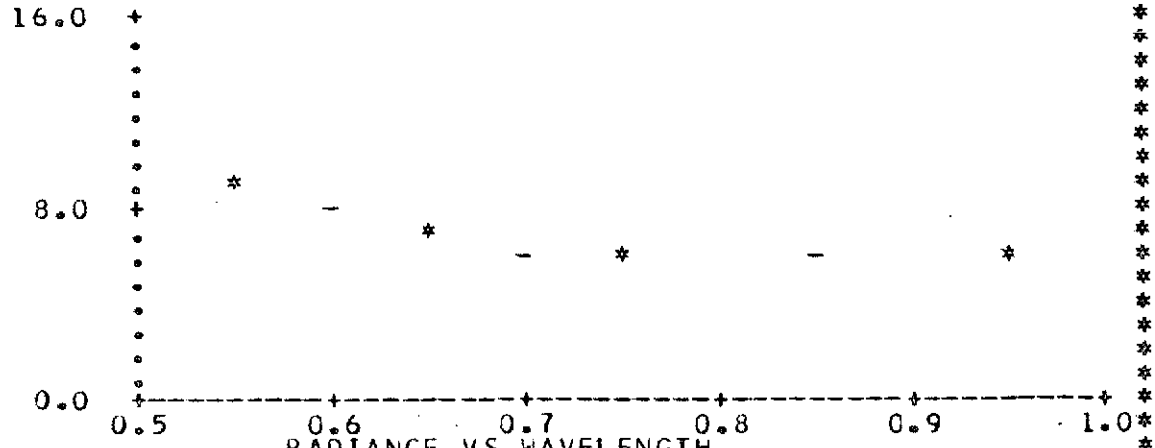
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.14 | 0.46 | .5 - .6 |
| BAND 5 | 7.34 | 0.56 | .6 - .7 |
| BAND 6 | 6.46 | 0.48 | .7 - .8 |
| BAND 7 | 5.63 | 0.36 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.643 | 0.655 | 0.539 |
| BAND 5 | 0.643 | 1.000 | 0.821 | 0.741 |
| BAND 6 | 0.655 | 0.821 | 1.000 | 0.738 |
| BAND 7 | 0.539 | 0.741 | 0.738 | 1.000 |

BAND RATIO PARAMETER -0.131
TRANSFORMED PARAMETER 0.607




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 26SEP73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1286-17462
DATE ACQUIRED: 05MAY73

CELLS 2829 TO 2832
LINES 1708 TO 1710
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

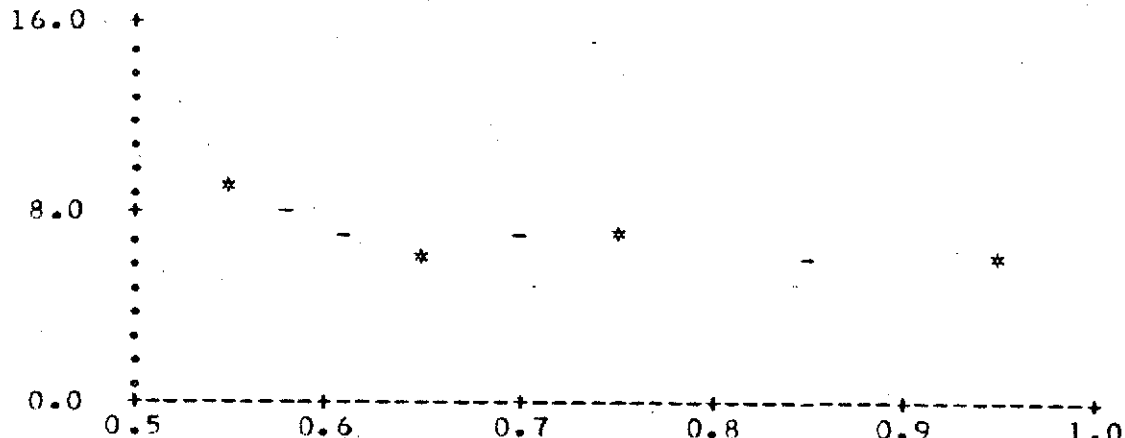
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.53 | 0.54 | .5 - .6 |
| BAND 5 | 6.38 | 0.51 | .6 - .7 |
| BAND 6 | 6.60 | 0.58 | .7 - .8 |
| BAND 7 | 5.93 | 0.37 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.812 | 0.694 | 0.332 |
| BAND 5 | 0.812 | 1.000 | 0.687 | 0.472 |
| BAND 6 | 0.694 | 0.687 | 1.000 | 0.733 |
| BAND 7 | 0.332 | 0.472 | 0.733 | 1.000 |

BAND RATIO PARAMETER -0.036
TRANSFORMED PARAMETER 0.681



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 28SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1286-17462
DATE ACQUIRED: 05MAY73

CELLS 2835 TO 2844
LINES 1754 TO 1756
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

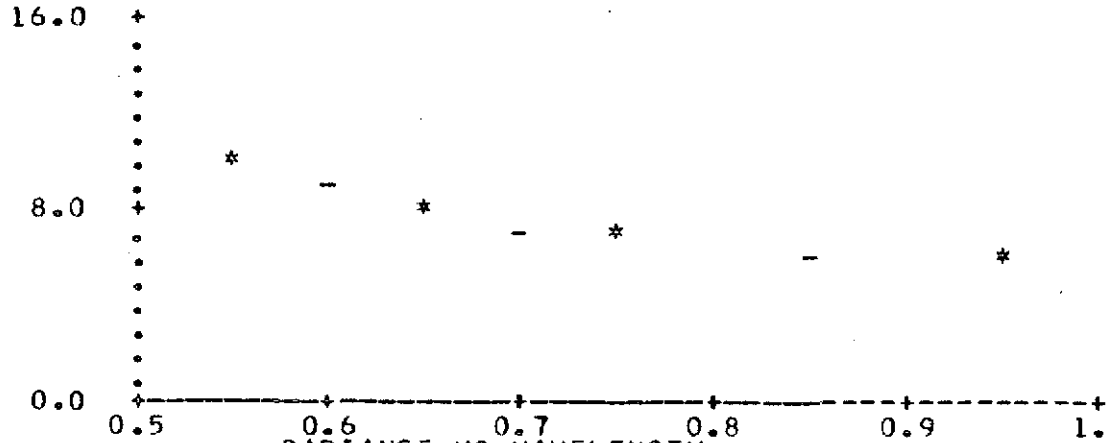
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.98 | 0.40 | .5 - .6 |
| BAND 5 | 8.01 | 0.51 | .6 - .7 |
| BAND 6 | 7.35 | 0.33 | .7 - .8 |
| BAND 7 | 6.06 | 0.33 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.692 | 0.380 | 0.258 |
| BAND 5 | 0.692 | 1.000 | 0.482 | 0.264 |
| BAND 6 | 0.380 | 0.482 | 1.000 | 0.759 |
| BAND 7 | 0.258 | 0.264 | 0.759 | 1.000 |

BAND RATIO PARAMETER -0.138
TRANSFORMED PARAMETER 0.601




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 28SEP73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1286-17462
DATE ACQUIRED: 05MAY73

CELLS 2815 TO 2818
LINES 1711 TO 1718
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

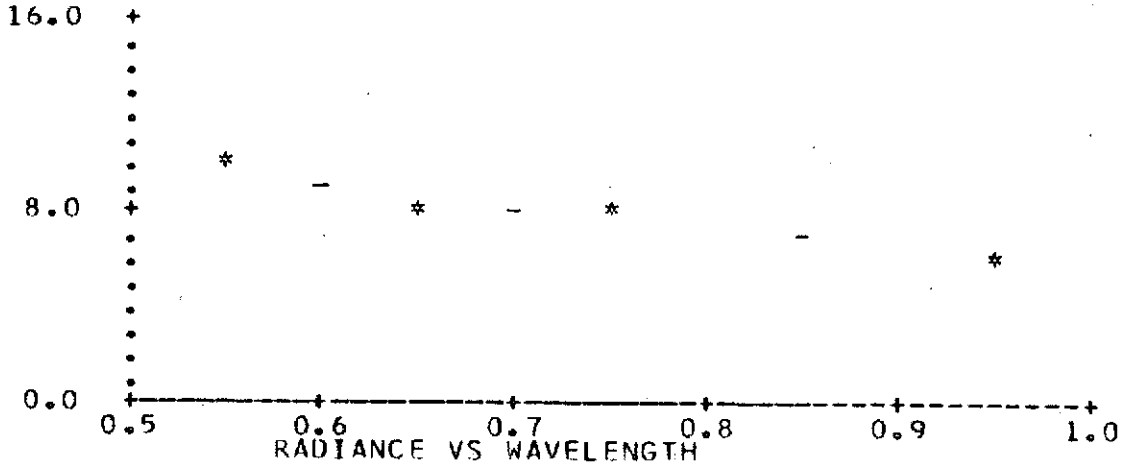
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.65 | 0.29 | .5 - .6 |
| BAND 5 | 7.65 | 0.45 | .6 - .7 |
| BAND 6 | 7.60 | 0.34 | .7 - .8 |
| BAND 7 | 6.44 | 0.31 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.369 | 0.147 | 0.158 |
| BAND 5 | 0.369 | 1.000 | 0.190 | 0.214 |
| BAND 6 | 0.147 | 0.190 | 1.000 | 0.553 |
| BAND 7 | 0.158 | 0.214 | 0.553 | 1.000 |

BAND RATIO PARAMETER -0.086
TRANSFORMED PARAMETER 0.644




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 28SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1303-17403
DATE ACQUIRED: 22MAY73

CELLS 989 TO 992
LINES 1929 TO 1932
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

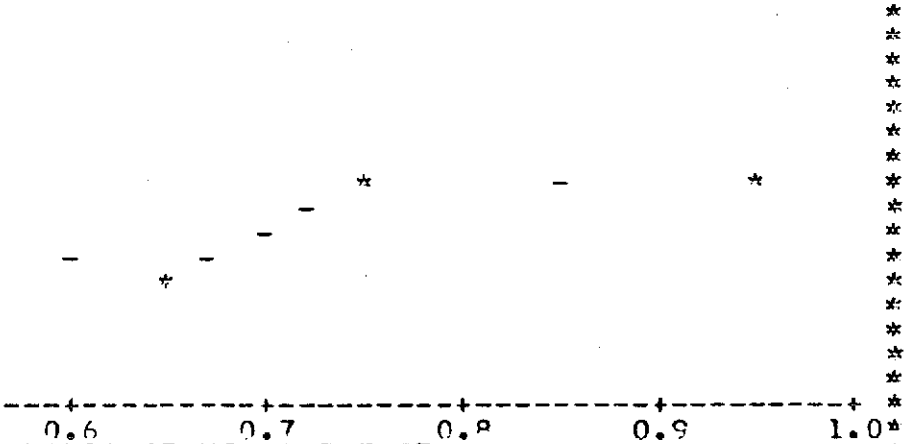
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.39 | 0.41 | .5 - .6 |
| BAND 5 | 4.78 | 0.45 | .6 - .7 |
| BAND 6 | 8.54 | 0.96 | .7 - .8 |
| BAND 7 | 8.59 | 1.09 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.633 | 0.458 | 0.441 |
| BAND 5 | 0.633 | 1.000 | 0.163 | 0.046 |
| BAND 6 | 0.458 | 0.163 | 1.000 | 0.941 |
| BAND 7 | 0.441 | 0.046 | 0.941 | 1.000 |

BAND RATIO PARAMETER 0.284
TRANSFORMED PARAMETER 0.886



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1303-17403
DATE ACQUIRED: 22MAY73

CELLS 995 TO 1002
LINES 1970 TO 1984
TOTAL POINTS 120

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

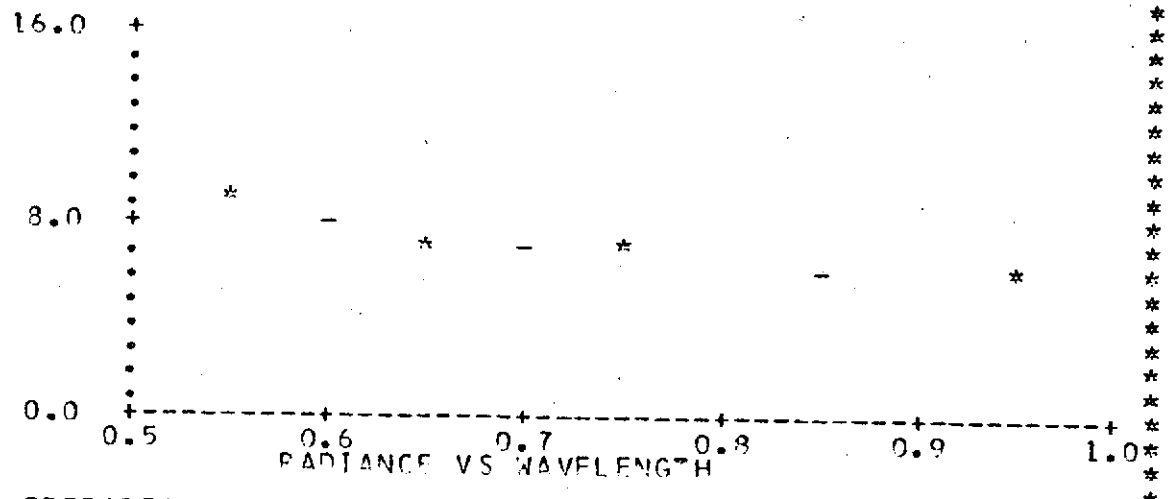
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.17 | 0.61 | .5 - .6 |
| BAND 5 | 7.30 | 1.00 | .6 - .7 |
| BAND 6 | 7.36 | 0.54 | .7 - .8 |
| BAND 7 | 6.32 | 0.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.880 | 0.710 | 0.514 |
| BAND 5 | 0.880 | 1.000 | 0.775 | 0.507 |
| BAND 6 | 0.710 | 0.775 | 1.000 | 0.791 |
| BAND 7 | 0.514 | 0.507 | 0.791 | 1.000 |

BAND RATIO PARAMETER -0.072
TRANSFORMED PARAMETER 0.654




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1303-17403
DATE ACQUIRED: 22MAY73

CELLS 975 TO 978
LINES 1933 TO 1939
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

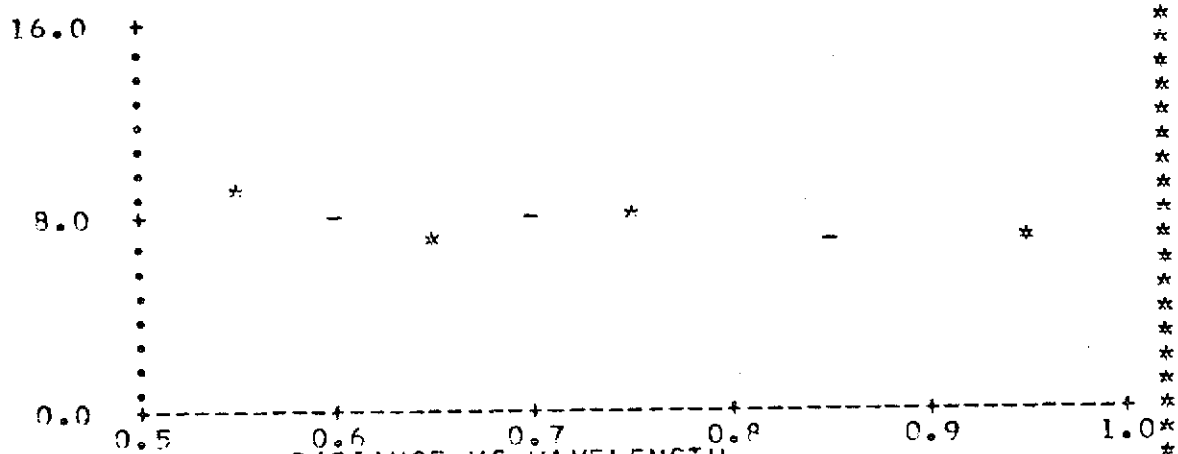
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.18 | 0.37 | .5 - .6 |
| BAND 5 | 7.22 | 0.31 | .6 - .7 |
| BAND 6 | 7.80 | 0.34 | .7 - .8 |
| BAND 7 | 6.96 | 0.35 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.346 | -0.240 | -0.381 |
| BAND 5 | 0.346 | 1.000 | 0.199 | -0.148 |
| BAND 6 | -0.240 | 0.199 | 1.000 | 0.600 |
| BAND 7 | -0.381 | -0.148 | 0.600 | 1.000 |

BAND RATIO PARAMETER -0.018
TRANSFORMED PARAMETER 0.694




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 20MAY74

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1304-17461
DATE ACQUIRED: 23MAY73

CELLS 2765 TO 2768
LINES 1671 TO 1673
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

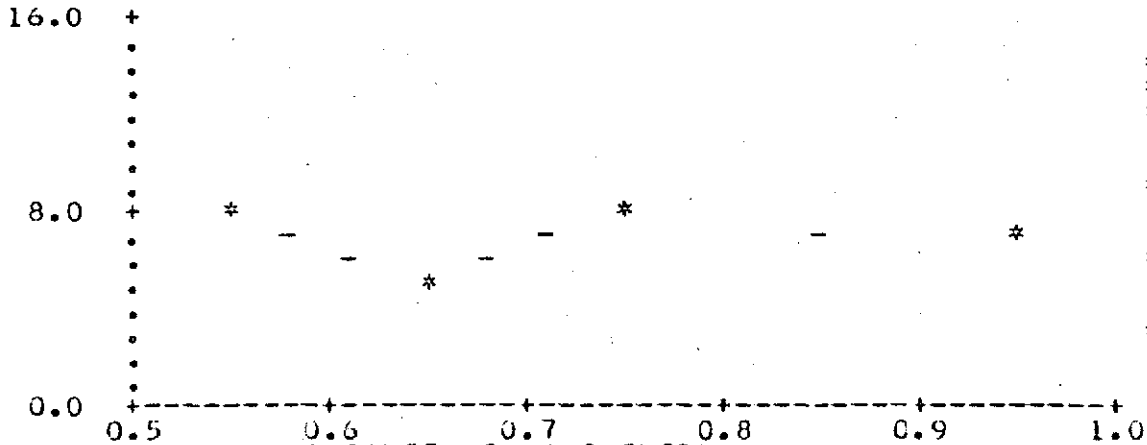
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.85 | 0.45 | .5 - .6 |
| BAND 5 | 5.41 | 0.57 | .6 - .7 |
| BAND 6 | 7.69 | 0.53 | .7 - .8 |
| BAND 7 | 7.23 | 0.81 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.898 | 0.179 | -0.011 |
| BAND 5 | 0.893 | 1.000 | 0.086 | -0.142 |
| BAND 6 | 0.179 | 0.086 | 1.000 | 0.901 |
| BAND 7 | -0.011 | -0.142 | 0.901 | 1.000 |

BAND RATIO PARAMETER 0.143
TRANSFORMED PARAMETER 0.802




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1304-17461
DATE ACQUIRED: 23MAY73

CELLS 2771 TO 2780
LINES 1716 TO 1726
TOTAL PCINTS 110

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

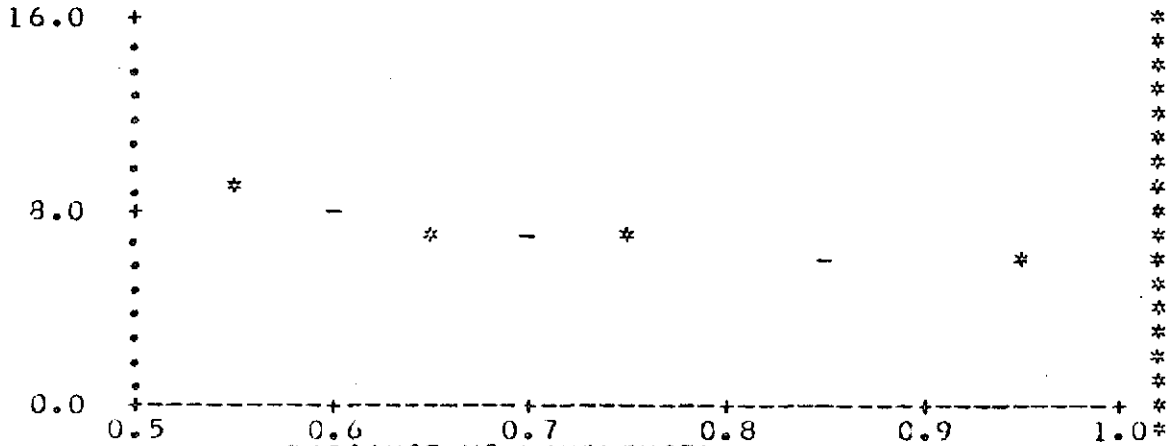
RADIANCE(MWATTS/SQCM-STR-MICRCMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICRCMETERS) |
|---|---|---|---|
| BAND 4 | 8.74 | 0.45 | .5 - .6 |
| BAND 5 | 6.64 | 0.49 | .6 - .7 |
| BAND 6 | 7.03 | 0.34 | .7 - .8 |
| BAND 7 | 5.91 | 0.37 | .8 -1.1 |

NORMALIZED CCVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.759 | 0.405 | 0.110 |
| BAND 5 | 0.759 | 1.000 | 0.313 | 0.068 |
| BAND 6 | 0.405 | 0.313 | 1.000 | 0.691 |
| BAND 7 | 0.110 | 0.068 | 0.691 | 1.000 |

BAND RATIO PARAMETER -0.058
TRANSFORMED PARAMETER 0.665




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DATA ANALYSIS LABORATORY 27SEP73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1304-17461
DATE ACQUIRED: 23MAY73

CELLS 2751 TO 2754
LINES 1674 TO 1681
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

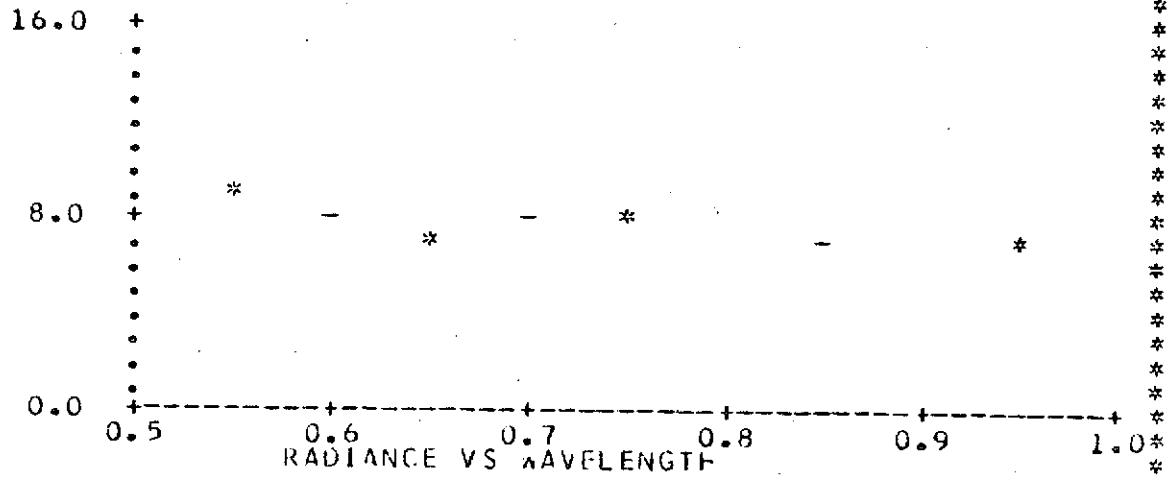
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.16 | 0.43 | .5 - .6 |
| BAND 5 | 7.21 | 0.50 | .6 - .7 |
| BAND 6 | 7.72 | 0.34 | .7 - .8 |
| BAND 7 | 6.67 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.684 | 0.350 | -0.182 |
| BAND 5 | 0.684 | 1.000 | 0.121 | -0.380 |
| BAND 6 | 0.350 | 0.121 | 1.000 | 0.508 |
| BAND 7 | -0.182 | -0.380 | 0.508 | 1.000 |

BAND RATIO PARAMETER -0.038
TRANSFORMED PARAMETER 0.679



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27SEP73



C-5

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1322-17460
DATE ACQUIRED: 10JUN73

CELLS 2785 TO 2788
LINES 1679 TO 1681
TOTAL POINTS 12

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

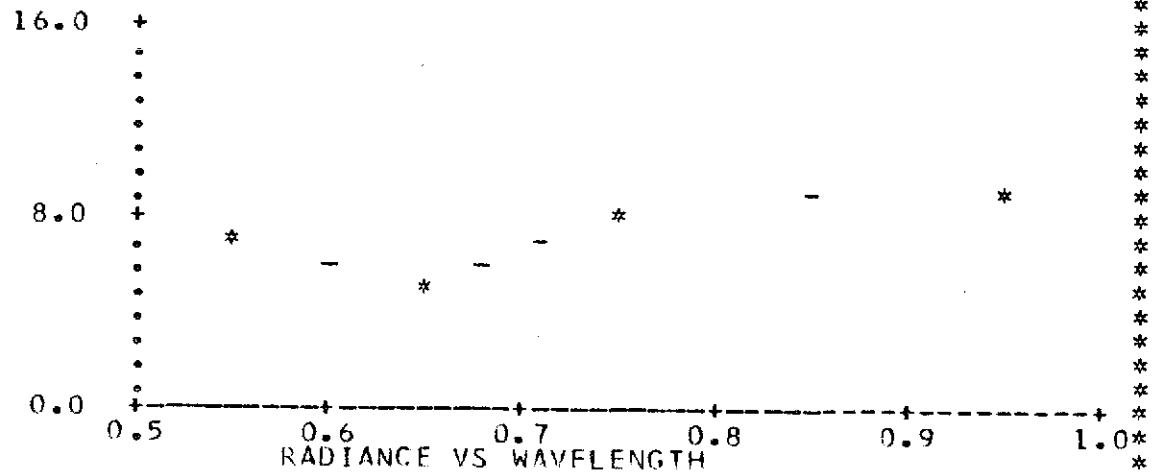
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.10 | 0.63 | .5 - .6 |
| BAND 5 | 4.60 | 0.84 | .6 - .7 |
| BAND 6 | 8.36 | 0.74 | .7 - .8 |
| BAND 7 | 8.62 | 1.15 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.967 | -0.658 | -0.731 |
| BAND 5 | 0.967 | 1.000 | -0.698 | -0.773 |
| BAND 6 | -0.658 | -0.698 | 1.000 | 0.956 |
| BAND 7 | -0.731 | -0.773 | 0.956 | 1.000 |

BAND RATIO PARAMETER 0.304
TRANSFORMED PARAMETER 0.897



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1322-17460
DATE ACQUIRED: 10JUN73

CELLS 2793 TO 2800
LINES 1724 TO 1733
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

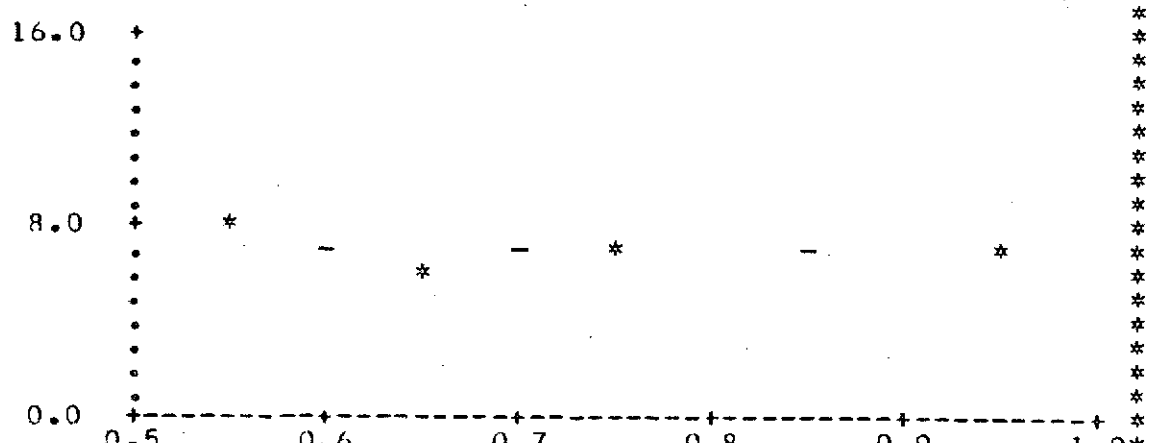
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.12 | 0.42 | .5 - .6 |
| BAND 5 | 5.96 | 0.50 | .6 - .7 |
| BAND 6 | 7.15 | 0.42 | .7 - .8 |
| BAND 7 | 6.62 | 0.61 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.761 | 0.196 | -0.047 |
| BAND 5 | 0.761 | 1.000 | -0.045 | -0.295 |
| BAND 6 | 0.196 | -0.045 | 1.000 | 0.868 |
| BAND 7 | -0.047 | -0.295 | 0.868 | 1.000 |

BAND RATIO PARAMETER 0.052
TRANSFORMED PARAMETER 0.743



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28SEP73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1322-17460
DATE ACQUIRED: 10JUN73

CELLS 2773 TO 2776
LINES 1682 TO 1689
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

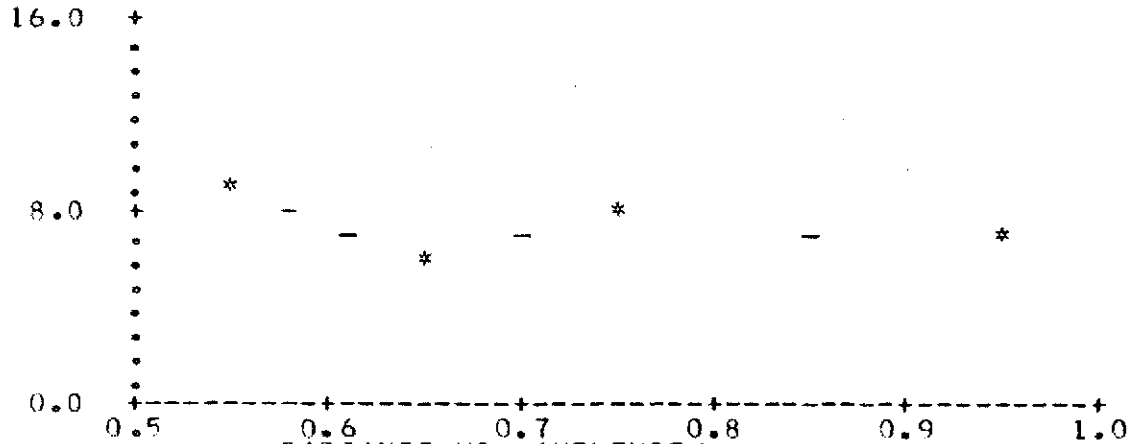
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.61 | 0.41 | .5 - .6 |
| BAND 5 | 6.45 | 0.51 | .6 - .7 |
| BAND 6 | 7.87 | 0.47 | .7 - .8 |
| BAND 7 | 7.28 | 0.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.737 | 0.392 | -0.010 |
| BAND 5 | 0.737 | 1.000 | 0.340 | -0.121 |
| BAND 6 | 0.392 | 0.340 | 1.000 | 0.710 |
| BAND 7 | -0.010 | -0.121 | 0.710 | 1.000 |

BAND RATIO PARAMETER 0.060
TRANSFORMED PARAMETER 0.748



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28SEP73

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# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1339-17400
DATE ACQUIRED: 27JUN73

CELLS 1001 TO 1004
LINES 1931 TO 1934
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

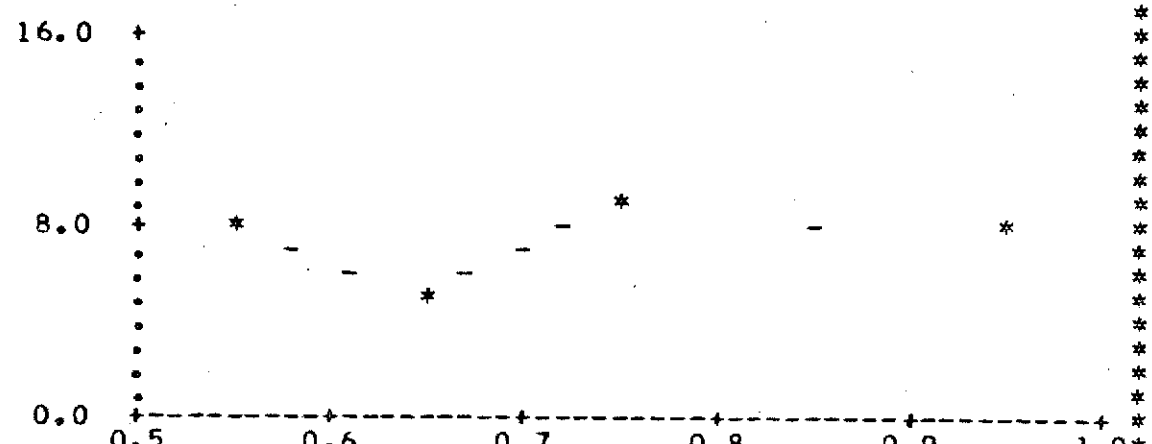
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.61 | 0.72 | .5 - .6 |
| BAND 5 | 5.15 | 0.78 | .6 - .7 |
| BAND 6 | 8.70 | 0.51 | .7 - .8 |
| BAND 7 | 8.33 | 0.56 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.947 | -0.048 | -0.537 |
| BAND 5 | 0.947 | 1.000 | -0.028 | -0.493 |
| BAND 6 | -0.048 | -0.028 | 1.000 | 0.757 |
| BAND 7 | -0.537 | -0.493 | 0.757 | 1.000 |

BAND RATIO PARAMETER 0.235
TRANSFORMED PARAMETER 0.858




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1339-17400
DATE ACQUIRED: 27JUN73

CELLS 1009 TO 1016
LINES 1976 TO 1985
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

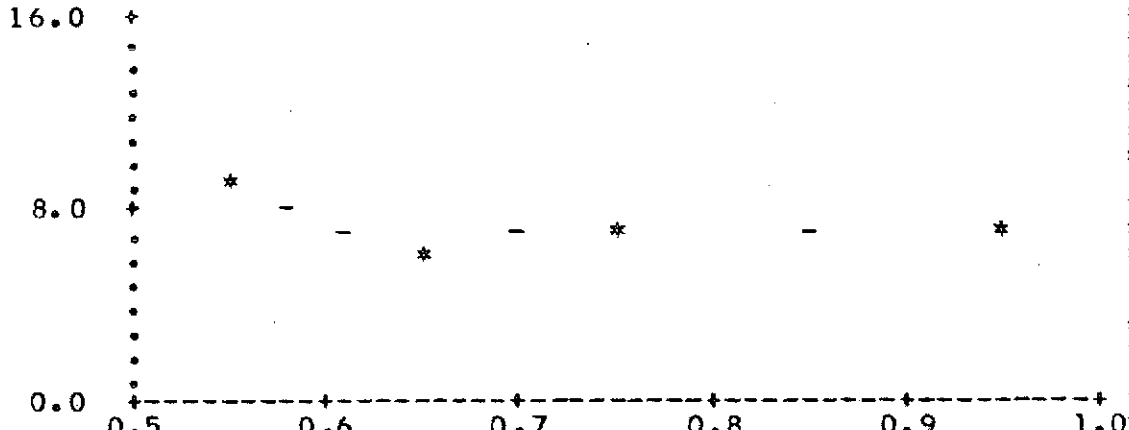
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.52 | 0.62 | .5 - .6 |
| BAND 5 | 6.09 | 0.65 | .6 - .7 |
| BAND 6 | 7.48 | 0.45 | .7 - .8 |
| BAND 7 | 6.55 | 0.56 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.886 | 0.201 | -0.221 |
| BAND 5 | 0.886 | 1.000 | 0.067 | -0.350 |
| BAND 6 | 0.201 | 0.067 | 1.000 | 0.732 |
| BAND 7 | -0.221 | -0.350 | 0.732 | 1.000 |

BAND RATIO PARAMETER 0.036
TRANSFORMED PARAMETER 0.732




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1339-17400
DATE ACQUIRED: 27JUN73

CELLS 989 TO 992
LINES 1933 TO 1940
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

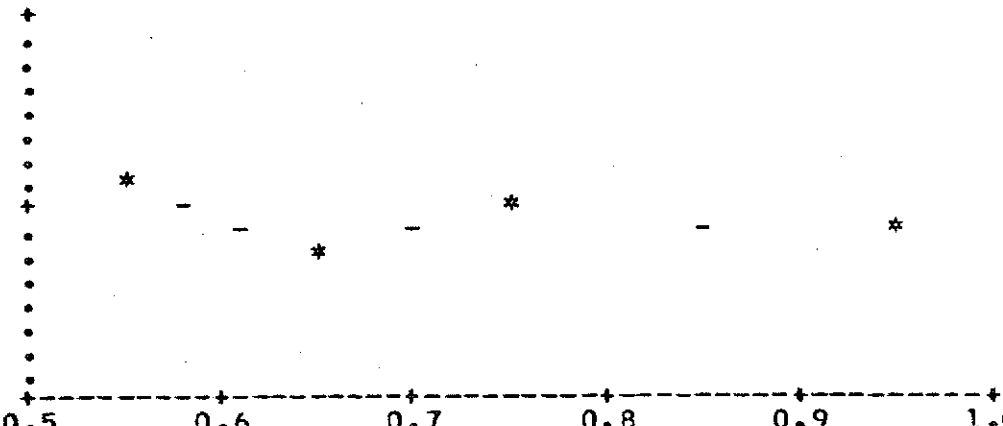
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.63 | 0.47 | .5 - .6 |
| BAND 5 | 6.33 | 0.50 | .6 - .7 |
| BAND 6 | 8.01 | 0.36 | .7 - .8 |
| BAND 7 | 7.30 | 0.52 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.839 | 0.108 | -0.323 |
| BAND 5 | 0.839 | 1.000 | 0.003 | -0.457 |
| BAND 6 | 0.108 | 0.003 | 1.000 | 0.716 |
| BAND 7 | -0.323 | -0.457 | 0.716 | 1.000 |

BAND RATIO PARAMETER 0.071
TRANSFORMED PARAMETER 0.756



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1357-17395
DATE ACQUIRED: 15JUL73

CELLS 1007 TO 1010
LINES 1871 TO 1875
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

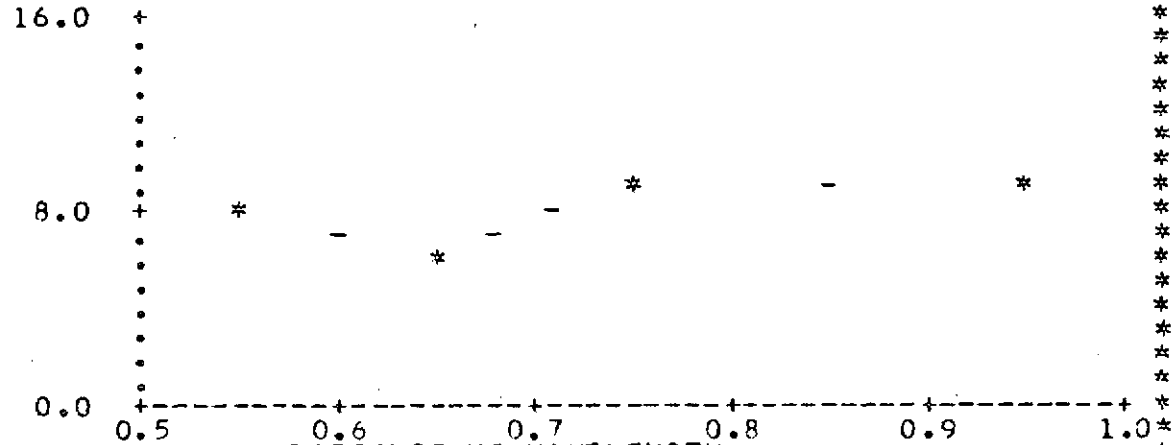
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.28 | 0.95 | .5 - .6 |
| BAND 5 | 6.00 | 1.31 | .6 - .7 |
| BAND 6 | 9.16 | 0.61 | .7 - .8 |
| BAND 7 | 8.73 | 0.88 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.961 | 0.338 | -0.349 |
| BAND 5 | 0.961 | 1.000 | 0.209 | -0.475 |
| BAND 6 | 0.338 | 0.209 | 1.000 | 0.677 |
| BAND 7 | -0.349 | -0.475 | 0.677 | 1.000 |

BAND RATIO PARAMETER 0.186
TRANSFORMED PARAMETER 0.828



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13MAY74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1357-17395
DATE ACQUIRED: 15JUL73

CELLS 1013 TO 1022
LINES 1918 TO 1927
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

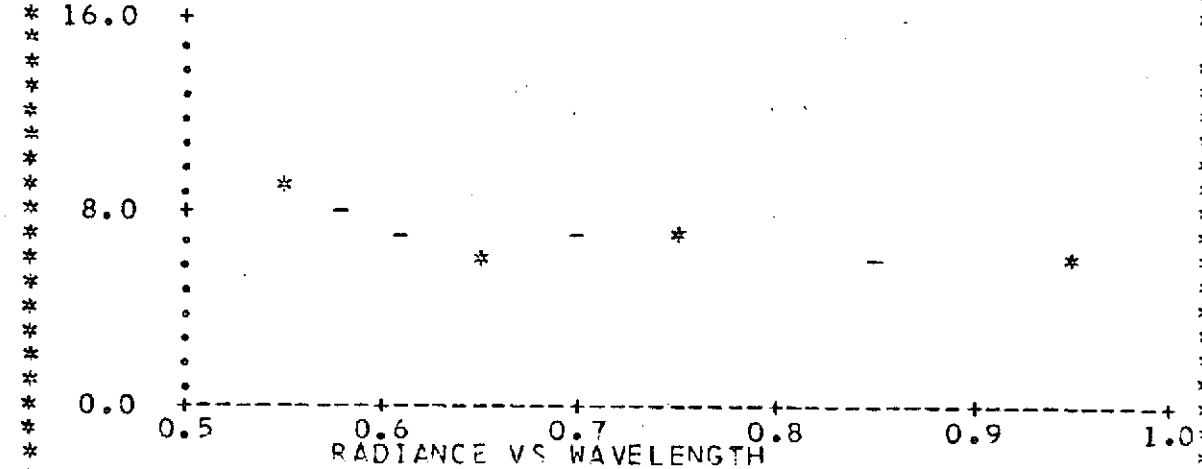
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.82 | 0.48 | .5 - .6 |
| BAND 5 | 6.48 | 0.54 | .6 - .7 |
| BAND 6 | 7.44 | 0.43 | .7 - .8 |
| BAND 7 | 6.48 | 0.52 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.798 | 0.046 | -0.289 |
| BAND 5 | 0.798 | 1.000 | -0.005 | -0.279 |
| BAND 6 | 0.046 | -0.005 | 1.000 | 0.781 |
| BAND 7 | -0.289 | -0.279 | 0.781 | 1.000 |

BAND RATIO PARAMETER 0.000
TRANSFORMED PARAMETER 0.707



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 13MAY74

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1357-17395
DATE ACQUIRED: 15JUL73

CELLS 995 TO 998
LINES 1875 TO 1882
TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

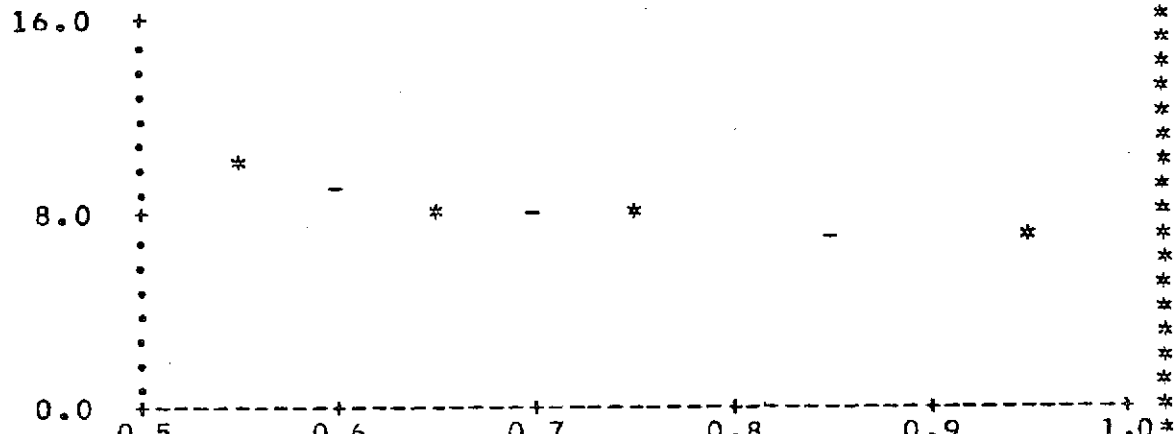
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.54 | 0.40 | .5 - .6 |
| BAND 5 | 7.90 | 0.50 | .6 - .7 |
| BAND 6 | 8.48 | 0.58 | .7 - .8 |
| BAND 7 | 7.29 | 0.54 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.486 | 0.277 | 0.077 |
| BAND 5 | 0.486 | 1.000 | 0.702 | 0.500 |
| BAND 6 | 0.277 | 0.702 | 1.000 | 0.844 |
| BAND 7 | 0.077 | 0.500 | 0.844 | 1.000 |

BAND RATIO PARAMETER -0.040
TRANSFORMED PARAMETER 0.678



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 13MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 A
IMAGE IDENTIFIER: 1358-17453
DATE ACQUIRED: 16JUL73

CELLS 2723 TO 2726
LINES 1495 TO 1499
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

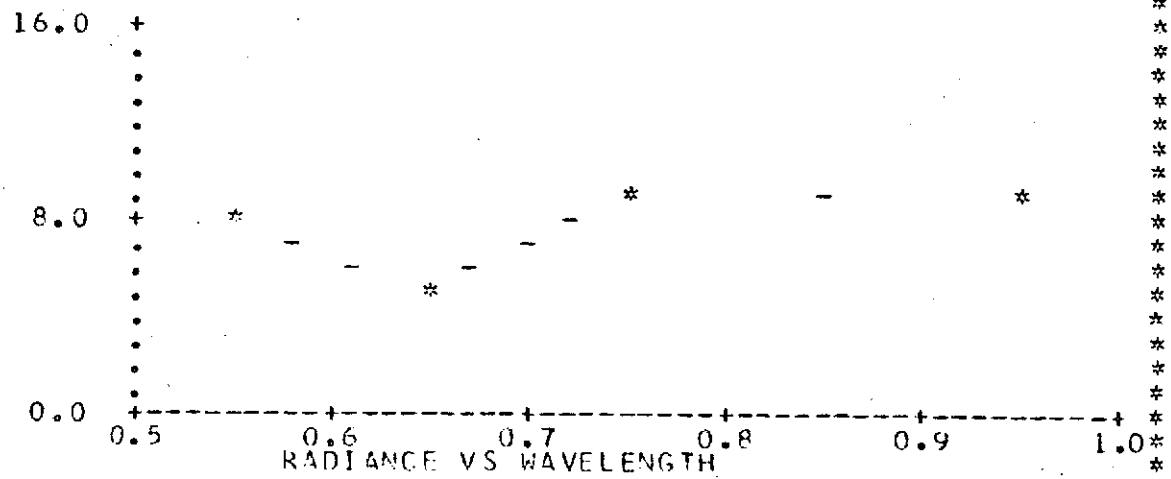
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.86 | 0.96 | .5 - .6 |
| BAND 5 | 5.45 | 1.21 | .6 - .7 |
| BAND 6 | 8.88 | 0.85 | .7 - .8 |
| BAND 7 | 8.54 | 0.98 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.859 | 0.313 | -0.091 |
| BAND 5 | 0.859 | 1.000 | -0.007 | -0.432 |
| BAND 6 | 0.313 | -0.007 | 1.000 | 0.855 |
| BAND 7 | -0.091 | -0.432 | 0.855 | 1.000 |

BAND RATIO PARAMETER 0.221
TRANSFORMED PARAMETER 0.849



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1358-17453
DATE ACQUIRED: 16JUL73

CELLS 2731 TO 2740
LINES 1541 TO 1550
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

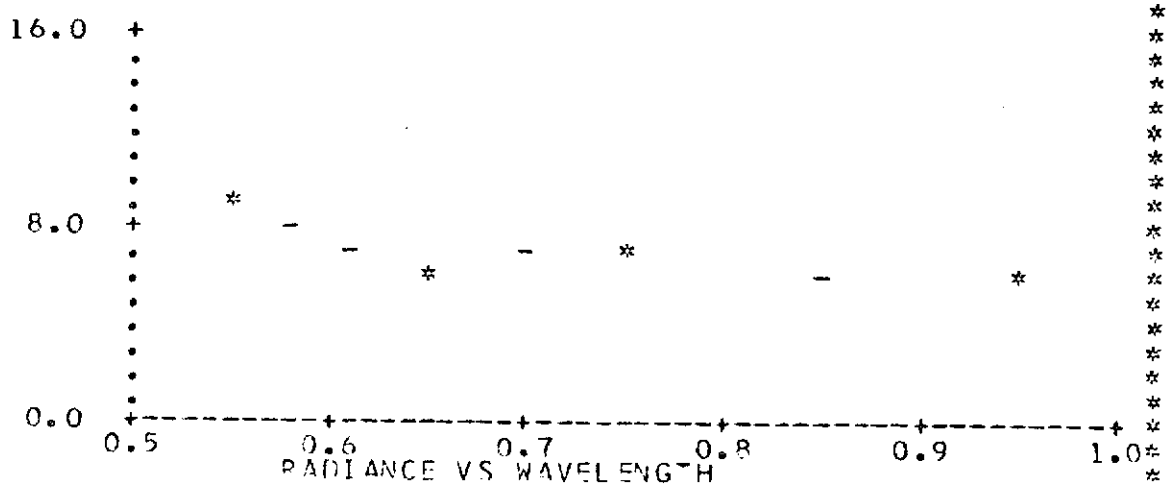
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.58 | 0.48 | .5 - .6 |
| BAND 5 | 6.38 | 0.53 | .6 - .7 |
| BAND 6 | 7.14 | 0.44 | .7 - .8 |
| BAND 7 | 6.20 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.711 | 0.071 | -0.216 |
| BAND 5 | 0.711 | 1.000 | 0.092 | -0.226 |
| BAND 6 | 0.071 | 0.092 | 1.000 | 0.764 |
| BAND 7 | -0.216 | -0.226 | 0.764 | 1.000 |

BAND RATIO PARAMETER -0.015
TRANSFORMED PARAMETER 0.697



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 07JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1358-17453
DATE ACQUIRED: 16JUL73

CELLS 2709 TO 2712
LINES 1499 TO 1505
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

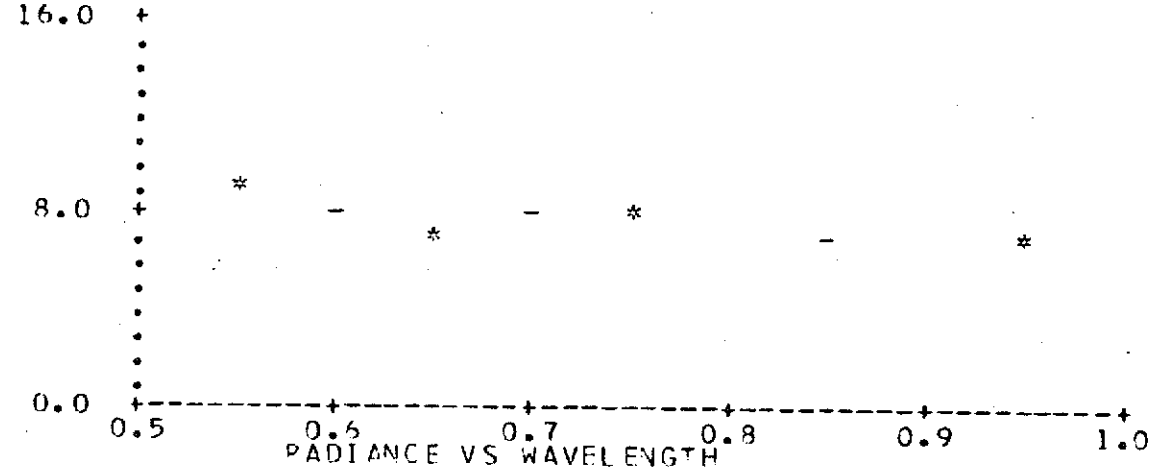
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.28 | 0.40 | .5 - .6 |
| BAND 5 | 7.49 | 0.49 | .6 - .7 |
| BAND 6 | 7.95 | 0.41 | .7 - .8 |
| BAND 7 | 6.82 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.707 | 0.439 | 0.141 |
| BAND 5 | 0.707 | 1.000 | 0.648 | 0.348 |
| BAND 6 | 0.439 | 0.648 | 1.000 | 0.641 |
| BAND 7 | 0.141 | 0.348 | 0.641 | 1.000 |

BAND RATIO PARAMETER -0.047
TRANSFORMED PARAMETER 0.673




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74



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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV.7 A
IMAGE IDENTIFIER: 1376-17452
DATE ACQUIRED: 03AUG73

CELLS 2711 TO 2714
LINES 1501 TO 1504
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

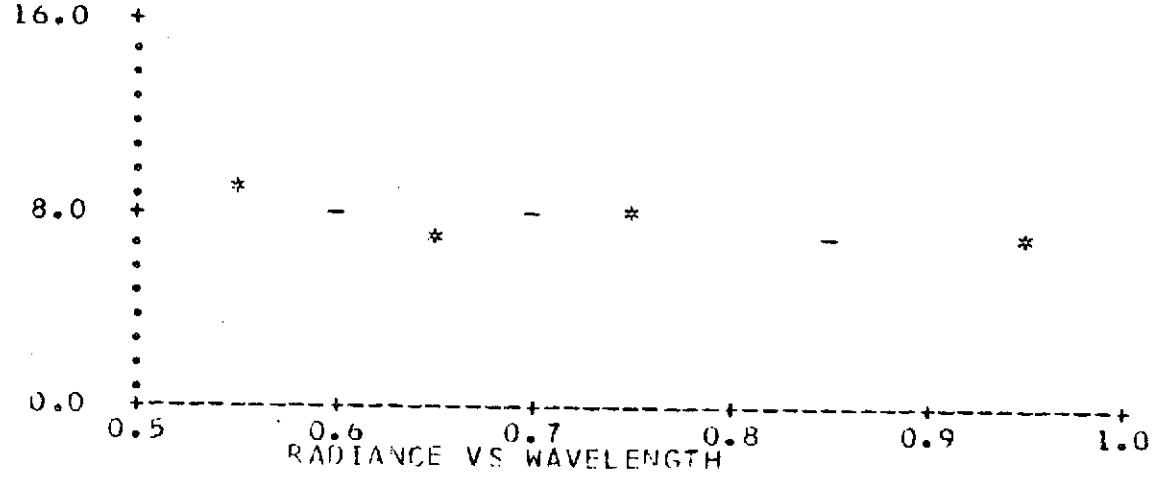
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.77 | 1.28 | .5 - .6 |
| BAND 5 | 7.04 | 1.87 | .6 - .7 |
| BAND 6 | 8.16 | 0.65 | .7 - .8 |
| BAND 7 | 7.30 | 0.45 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.974 | 0.679 | -0.438 |
| BAND 5 | 0.974 | 1.000 | 0.775 | -0.348 |
| BAND 6 | 0.679 | 0.775 | 1.000 | 0.235 |
| BAND 7 | -0.438 | -0.348 | 0.235 | 1.000 |

BAND RATIO PARAMETER 0.018
TRANSFORMED PARAMETER 0.720



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 R
IMAGE IDENTIFIER: 1376-17452
DATE ACQUIRED: 03AUG73

CELLS 2719 TO 2726
LINES 1547 TO 1556
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

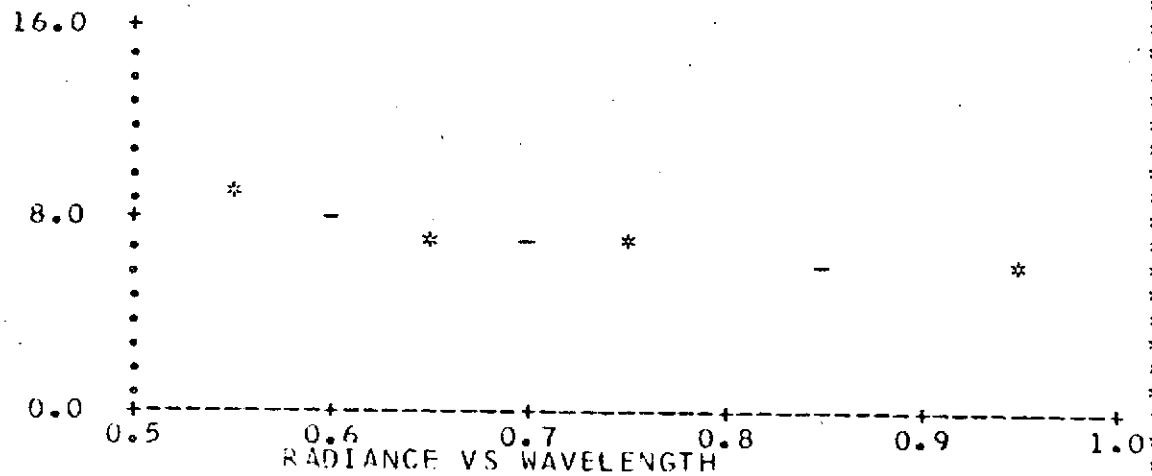
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.12 | 0.43 | .5 - .6 |
| BAND 5 | 7.00 | 0.54 | .6 - .7 |
| BAND 6 | 7.22 | 0.44 | .7 - .8 |
| BAND 7 | 5.96 | 0.46 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.755 | 0.325 | -0.017 |
| BAND 5 | 0.755 | 1.000 | 0.246 | -0.139 |
| BAND 6 | 0.325 | 0.246 | 1.000 | 0.688 |
| BAND 7 | -0.017 | -0.139 | 0.688 | 1.000 |

BAND RATIO PARAMETER -0.080
TRANSFORMED PARAMETER 0.648



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 7 W
IMAGE IDENTIFIER: 1376-17452
DATE ACQUIRED: 03AUG73

CELLS 2699 TO 2702
LINES 1504 TO 1512
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

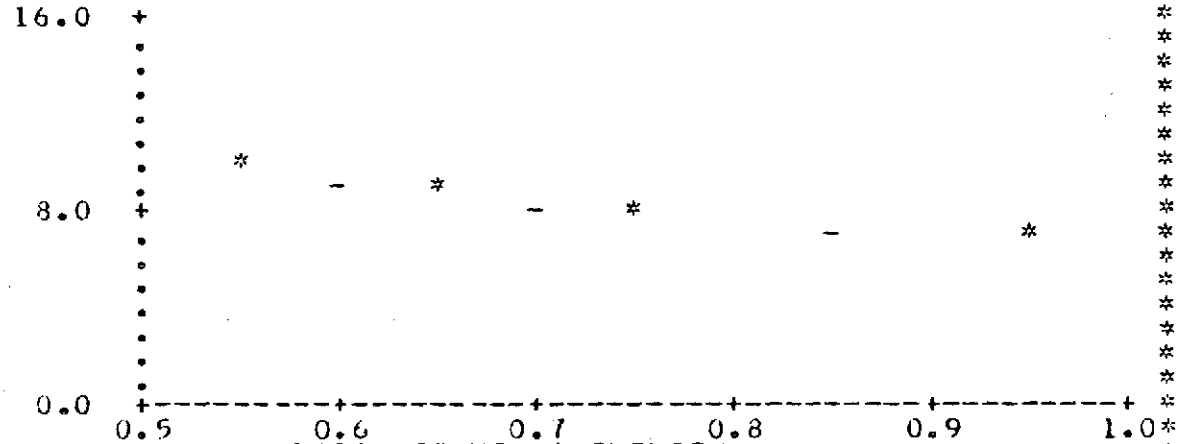
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.02 | 0.54 | .5 - .6 |
| BAND 5 | 8.73 | 0.63 | .6 - .7 |
| BAND 6 | 8.17 | 0.57 | .7 - .8 |
| BAND 7 | 6.63 | 0.46 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.727 | 0.729 | 0.614 |
| BAND 5 | 0.727 | 1.000 | 0.755 | 0.608 |
| BAND 6 | 0.729 | 0.755 | 1.000 | 0.754 |
| BAND 7 | 0.614 | 0.608 | 0.754 | 1.000 |

BAND RATIO PARAMETER -0.137
TRANSFORMED PARAMETER 0.602



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 A
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 3019 TO 3028
LINES 600 TO 612
TOTAL POINTS 130

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

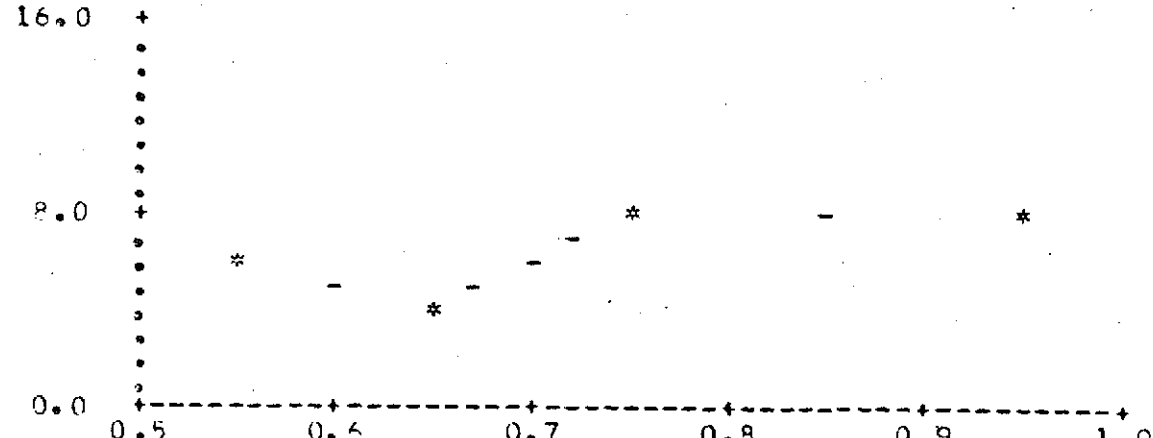
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.48 | 0.76 | .5 - .6 |
| BAND 5 | 4.36 | 1.15 | .6 - .7 |
| BAND 6 | 8.28 | 1.26 | .7 - .8 |
| BAND 7 | 8.45 | 1.62 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.909 | 0.079 | -0.097 |
| BAND 5 | 0.909 | 1.000 | -0.188 | -0.360 |
| BAND 6 | 0.079 | -0.188 | 1.000 | 0.947 |
| BAND 7 | -0.097 | -0.360 | 0.947 | 1.000 |

BAND RATIO PARAMETER 0.320
TRANSFORMED PARAMETER 0.905



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 27JUN73

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 8
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 3043 TO 3048
LINES 579 TO 584
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

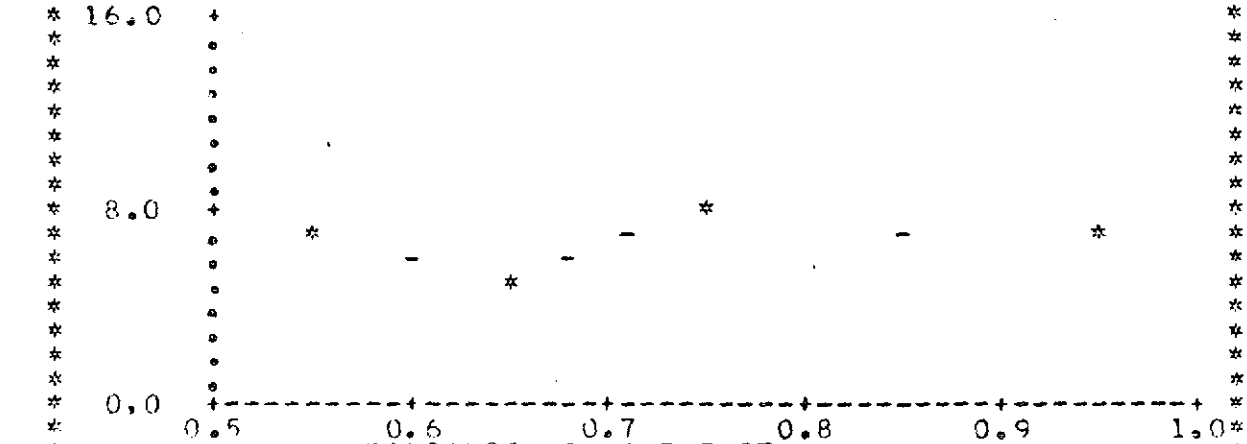
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.97 | 0.57 | .5 - .6 |
| BAND 5 | 5.11 | 0.72 | .6 - .7 |
| BAND 6 | 7.64 | 0.97 | .7 - .8 |
| BAND 7 | 7.48 | 1.26 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.963 | -0.145 | -0.219 |
| BAND 5 | 0.963 | 1.000 | -0.300 | -0.351 |
| BAND 6 | -0.145 | -0.300 | 1.000 | 0.960 |
| BAND 7 | -0.219 | -0.351 | 0.960 | 1.000 |

BAND RATIO PARAMETER 0.189
TRANSFORMED PARAMETER 0.830



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 W
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 3047 TO 3052
LINES 574 TO 579
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

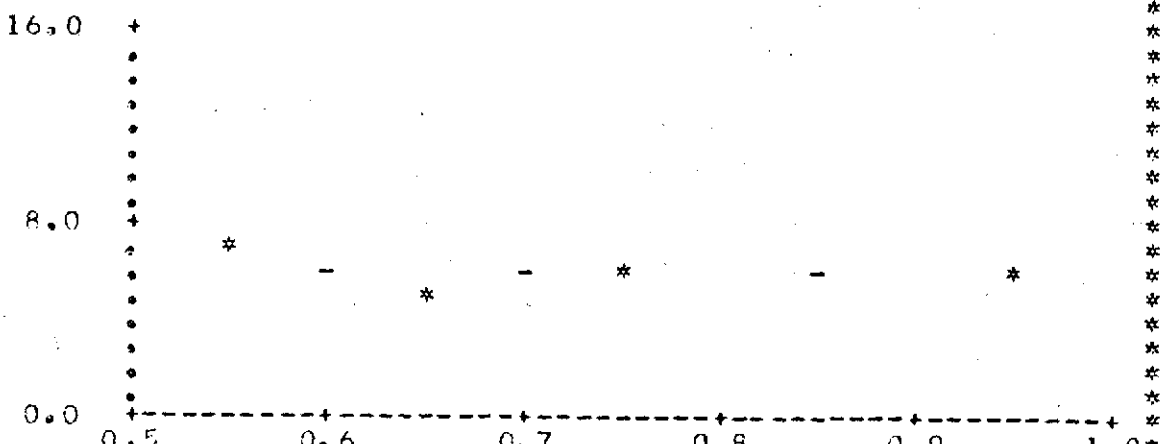
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.95 | 0.83 | .5 - .6 |
| BAND 5 | 5.24 | 1.03 | .6 - .7 |
| BAND 6 | 6.44 | 0.79 | .7 - .8 |
| BAND 7 | 5.98 | 0.96 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.928 | 0.675 | 0.367 |
| BAND 5 | 0.928 | 1.000 | 0.592 | 0.280 |
| BAND 6 | 0.675 | 0.592 | 1.000 | 0.859 |
| BAND 7 | 0.367 | 0.280 | 0.859 | 1.000 |

BAND RATIO PARAMETER 0.067
TRANSFORMED PARAMETER 0.753



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 27JUN73

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATION: CV @ A
IMAGE IDENTIFIER: 1035-17271
DATE ACQUIRED: 23AUG72

CELLS 1115 TO 1125
LINES 1097 TO 1109
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

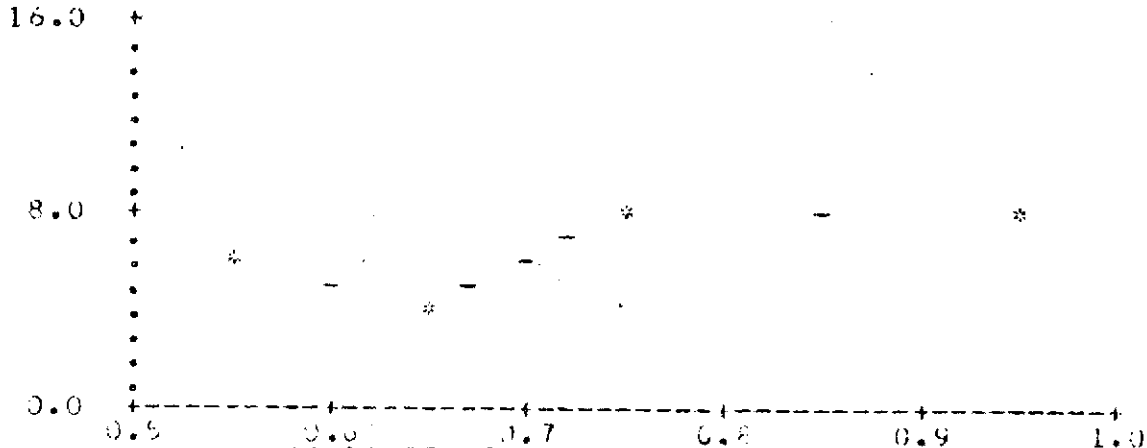
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.49 | 0.30 | .5 - .6 |
| BAND 5 | 3.61 | 0.41 | .6 - .7 |
| BAND 6 | 8.34 | 0.96 | .7 - .8 |
| BAND 7 | 8.45 | 1.20 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.308 | 0.235 | 0.194 |
| BAND 5 | 0.308 | 1.000 | -0.453 | -0.473 |
| BAND 6 | 0.235 | -0.453 | 1.000 | 0.944 |
| BAND 7 | 0.194 | -0.473 | 0.944 | 1.000 |

BAND RATIO PARAMETER 0.402
TRANSFORMED PARAMETER 0.950




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 05/30/73

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# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 3 P
IMAGE IDENTIFIER: 1036-17571
DATE ACQUIRED: 23AUG72

CELLS 1139 TO 1142
LINES 1075 TO 1079
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

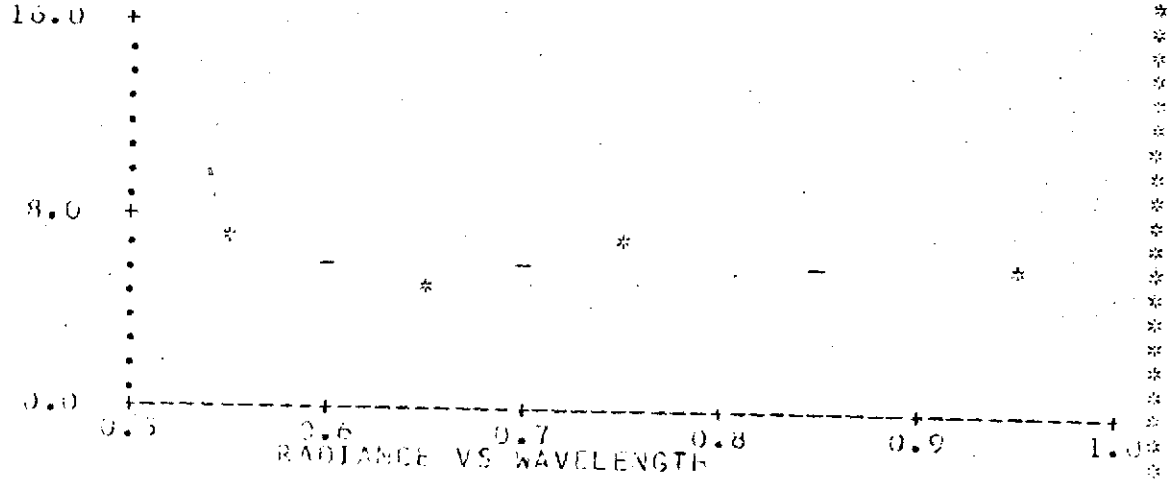
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.22 | 0.37 | .5 - .6 |
| BAND 5 | 5.45 | 0.51 | .6 - .7 |
| BAND 6 | 6.61 | 0.63 | .7 - .8 |
| BAND 7 | 6.43 | 0.39 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.702 | 0.408 | 0.436 |
| BAND 5 | 0.702 | 1.000 | 0.368 | 0.541 |
| BAND 6 | 0.408 | 0.368 | 1.000 | 0.860 |
| BAND 7 | 0.436 | 0.541 | 0.860 | 1.000 |

BAND RATIO PARAMETER 0.082
TRANSFORMED PARAMETER 0.763




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DATA ANALYSIS LABORATORY 09-OCT-73



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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 3 N
IMAGE IDENTIFIER: 1035-17571
DATE ACQUIRED: 28AUG72

CELLS 1145 TO 1146
LINES 1070 TO 1075
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

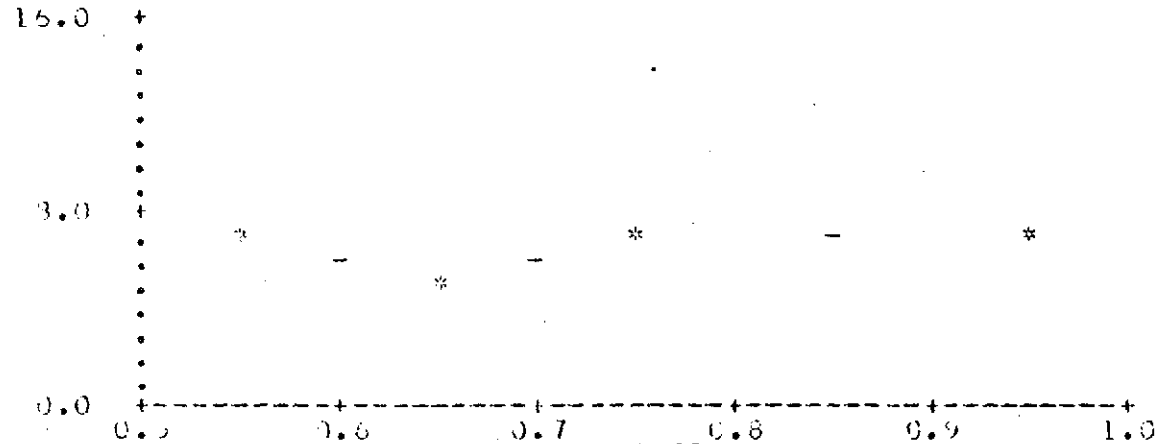
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.50 | 0.89 | .5 - .6 |
| BAND 5 | 5.12 | 1.05 | .6 - .7 |
| BAND 6 | 7.32 | 1.58 | .7 - .8 |
| BAND 7 | 7.02 | 1.56 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.930 | 0.501 | 0.532 |
| BAND 5 | 0.930 | 1.000 | 0.417 | 0.255 |
| BAND 6 | 0.501 | 0.417 | 1.000 | 0.961 |
| BAND 7 | 0.532 | 0.255 | 0.961 | 1.000 |

BAND RATIO PARAMETER 0.150
TRANSFORMED PARAMETER 0.806




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 09 NOV 73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV R A
IMAGE IDENTIFIER: 1037-18030
DATE ACQUIRED: 29AUG72

CELLS 2929 TO 2938
LINES 889 TO 893
TOTAL POINTS 120

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

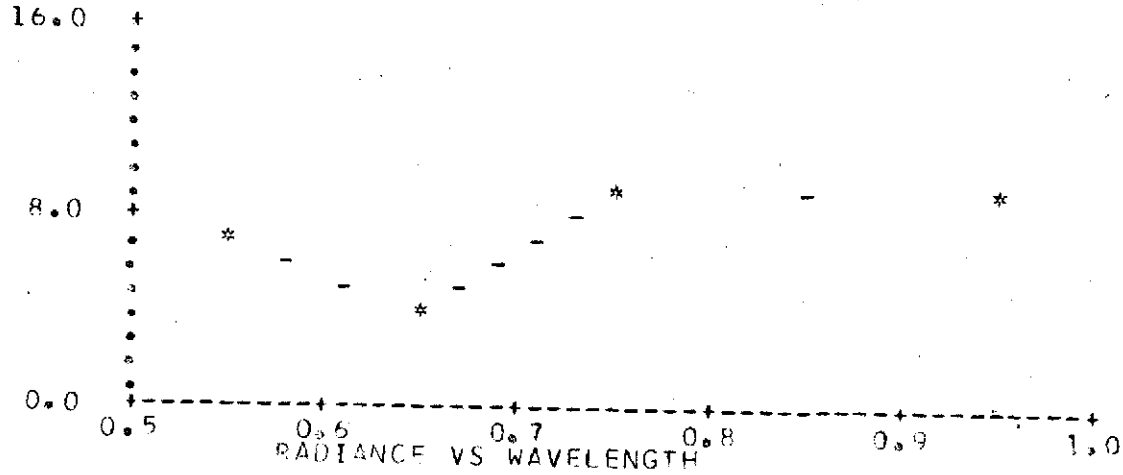
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.50 | 0.49 | .5 - .6 |
| BAND 5 | 3.74 | 0.67 | .6 - .7 |
| BAND 6 | 8.50 | 4.13 | .7 - .8 |
| BAND 7 | 9.07 | 1.60 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.670 | -0.039 | 0.102 |
| BAND 5 | 0.670 | 1.000 | -0.189 | -0.511 |
| BAND 6 | -0.039 | -0.189 | 1.000 | 0.282 |
| BAND 7 | 0.102 | -0.511 | 0.282 | 1.000 |

BAND RATIO PARAMETER 0.416
TRANSFORMED PARAMETER 0.957




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DATA ANALYSIS LABORATORY 14JUN73

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 R
IMAGE IDENTIFIER: 1037-18030
DATE ACQUIRED: 29AUG72

CELLS 2955 TO 2958
LINES 859 TO 865
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

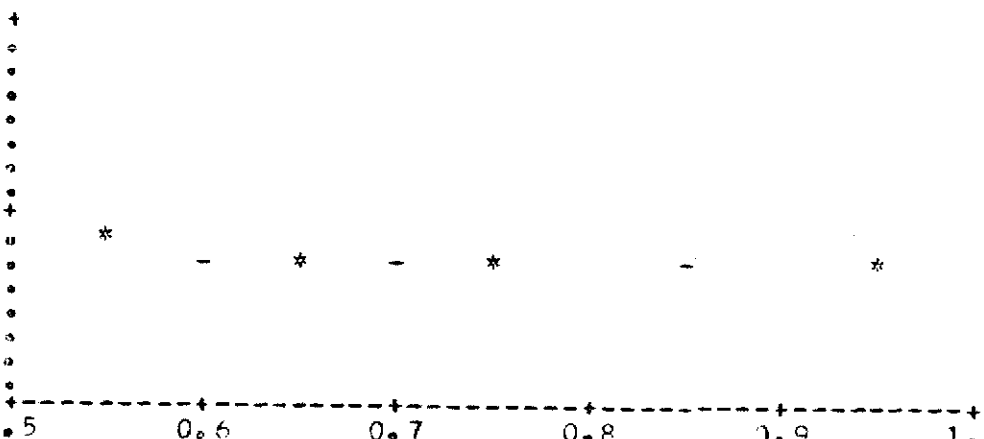
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.31 | 0.63 | .5 - .6 |
| BAND 5 | 5.75 | 0.74 | .6 - .7 |
| BAND 6 | 5.66 | 2.01 | .7 - .8 |
| BAND 7 | 6.38 | 0.77 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.858 | -0.414 | -0.242 |
| BAND 5 | 0.858 | 1.000 | -0.149 | 0.061 |
| BAND 6 | -0.414 | -0.149 | 1.000 | 0.739 |
| BAND 7 | -0.242 | 0.061 | 0.739 | 1.000 |

BAND RATIO PARAMETER 0.052
TRANSFORMED PARAMETER 0.743



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV B W
IMAGE IDENTIFIER: 1037-18030
DATE ACQUIRED: 29AUG72

CELLS 2959 TO 2964
LINES 855 TO 859
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

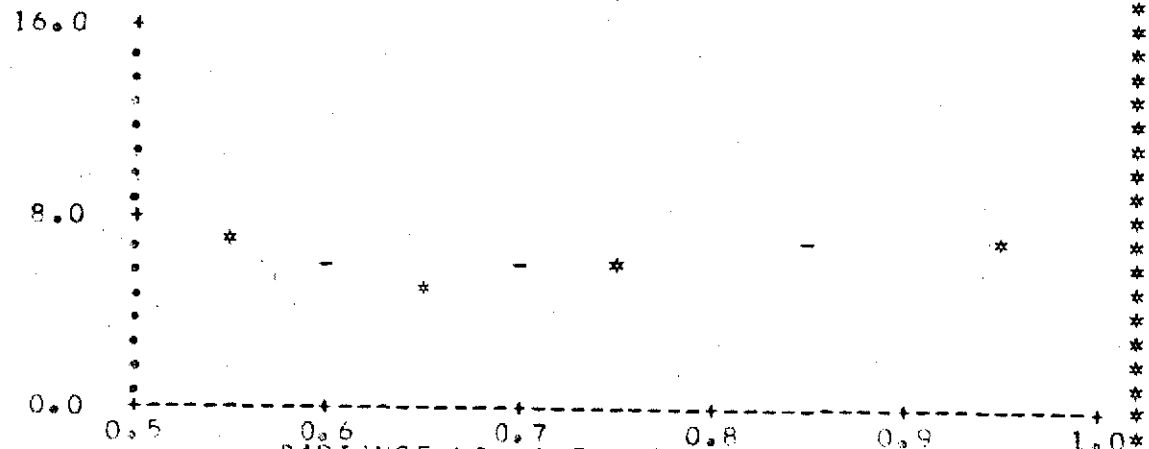
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.12 | 0.73 | .5 - .6 |
| BAND 5 | 5.12 | 0.94 | .6 - .7 |
| BAND 6 | 6.06 | 2.38 | .7 - .8 |
| BAND 7 | 6.54 | 1.40 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.910 | 0.360 | 0.303 |
| BAND 5 | 0.910 | 1.000 | 0.362 | 0.182 |
| BAND 6 | 0.360 | 0.362 | 1.000 | 0.819 |
| BAND 7 | 0.303 | 0.182 | 0.819 | 1.000 |

BAND RATIO PARAMETER 0.121
TRANSFORMED PARAMETER 0.788



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 14JUN73

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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 A
IMAGE IDENTIFIER: 1072-17571
DATE ACQUIRED: 030CT72

CELLS 1041 TO 1046
LINES 1252 TO 1258
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 35 DEGREES***

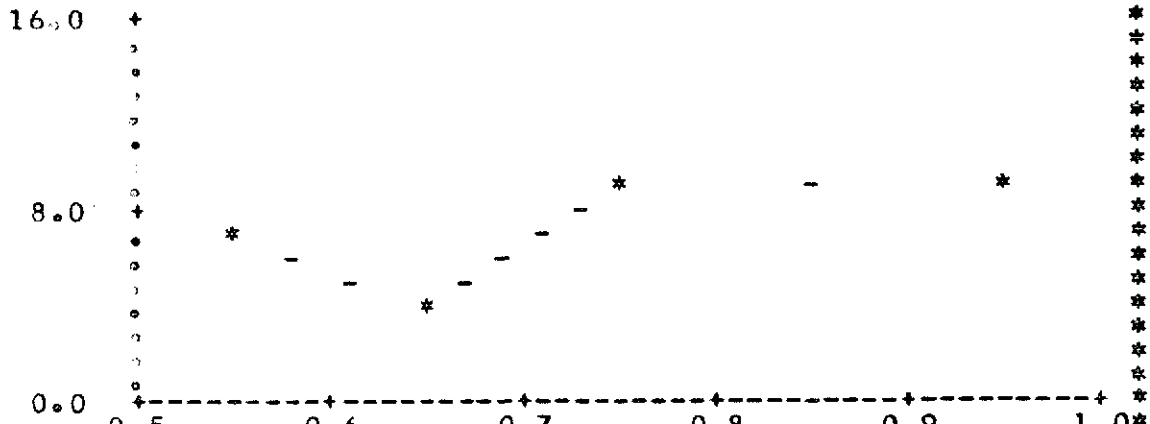
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.43 | 0.34 | .5 - .6 |
| BAND 5 | 4.47 | 0.49 | .6 - .7 |
| BAND 6 | 8.89 | 1.25 | .7 - .8 |
| BAND 7 | 9.26 | 1.43 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | -0.040 | 0.301 | 0.239 |
| BAND 5 | -0.040 | 1.000 | -0.564 | -0.607 |
| BAND 6 | 0.301 | -0.564 | 1.000 | 0.957 |
| BAND 7 | 0.239 | -0.607 | 0.957 | 1.000 |

BAND RATIO PARAMETER 0.349
TRANSFORMED PARAMETER 0.921



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 31JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 R
IMAGE IDENTIFIER: 1072-17571
DATE ACQUIRED: 030CT72

CELLS 1065 TO 1068
LINES 1230 TO 1235
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 35 DEGREES***

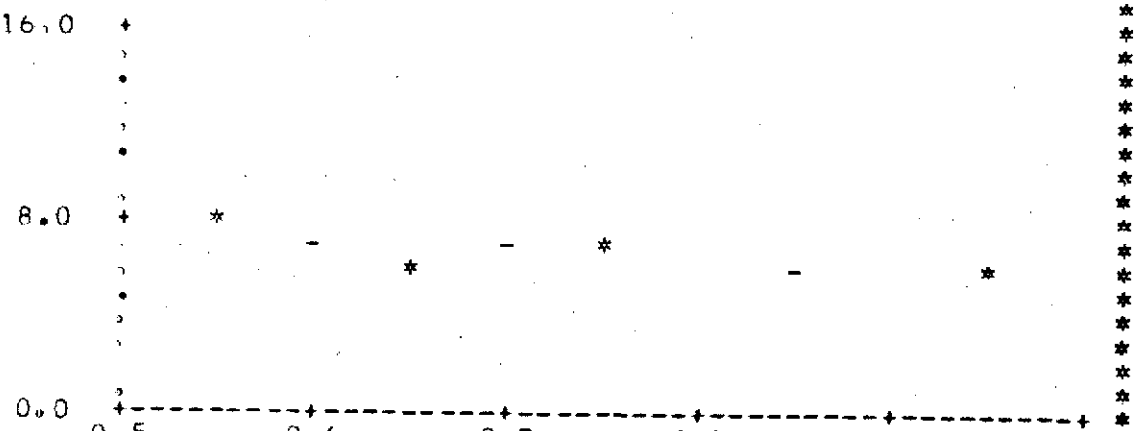
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.44 | 0.69 | .5 - .6 |
| BAND 5 | 6.18 | 0.88 | .6 - .7 |
| BAND 6 | 6.95 | 0.49 | .7 - .8 |
| BAND 7 | 6.37 | 0.57 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.867 | 0.539 | 0.342 |
| BAND 5 | 0.867 | 1.000 | 0.464 | 0.291 |
| BAND 6 | 0.539 | 0.464 | 1.000 | 0.711 |
| BAND 7 | 0.342 | 0.291 | 0.711 | 1.000 |

BAND RATIO PARAMETER 0.015
TRANSFORMED PARAMETER 0.718




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 31JUL73



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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 W
IMAGE IDENTIFIER: 1072-17571
DATE ACQUIRED: 030CT72

CELLS 1071 TO 1074
LINES 1225 TO 1229
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 35 DEGREES***

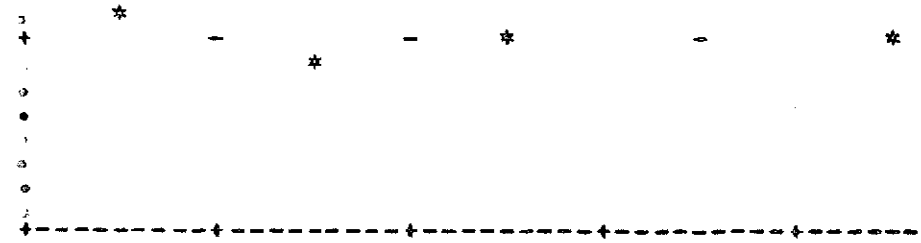
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.92 | 1.40 | .5 - .6 |
| BAND 5 | 6.51 | 1.43 | .6 - .7 |
| BAND 6 | 8.05 | 1.36 | .7 - .8 |
| BAND 7 | 7.77 | 1.10 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.948 | 0.758 | 0.556 |
| BAND 5 | 0.948 | 1.000 | 0.712 | 0.518 |
| BAND 6 | 0.758 | 0.712 | 1.000 | 0.910 |
| BAND 7 | 0.556 | 0.518 | 0.910 | 1.000 |

BAND RATIO PARAMETER 0.088
TRANSFORMED PARAMETER 0.767




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 31JUL73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 A
IMAGE IDENTIFIER: 1181-18033
DATE ACQUIRED: 20JAN73

CELLS 2919 TO 2924
LINES 1018 TO 1025
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 18 DEGREES***

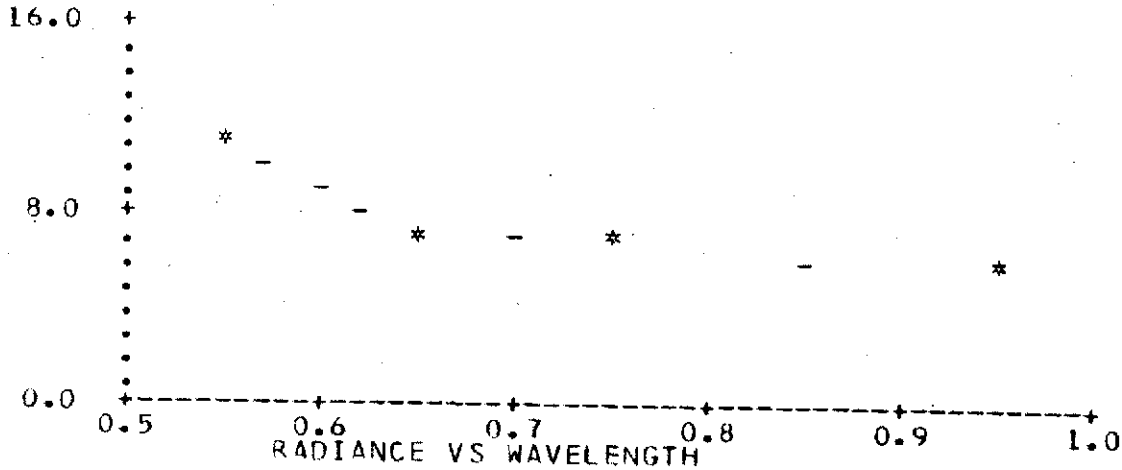
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.53 | 0.81 | .5 - .6 |
| BAND 5 | 7.19 | 0.63 | .6 - .7 |
| BAND 6 | 6.92 | 0.97 | .7 - .8 |
| BAND 7 | 6.19 | 0.80 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.666 | 0.619 | 0.521 |
| BAND 5 | 0.666 | 1.000 | 0.651 | 0.462 |
| BAND 6 | 0.619 | 0.651 | 1.000 | 0.692 |
| BAND 7 | 0.521 | 0.462 | 0.692 | 1.000 |

BAND RATIO PARAMETER -0.075
TRANSFORMED PARAMETER 0.652



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 R
IMAGE IDENTIFIER: 1181-18033
DATE ACQUIRED: 20JAN73

CELLS 2943 TO 2946
LINES 995 TO 1001
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 18 DEGREES***

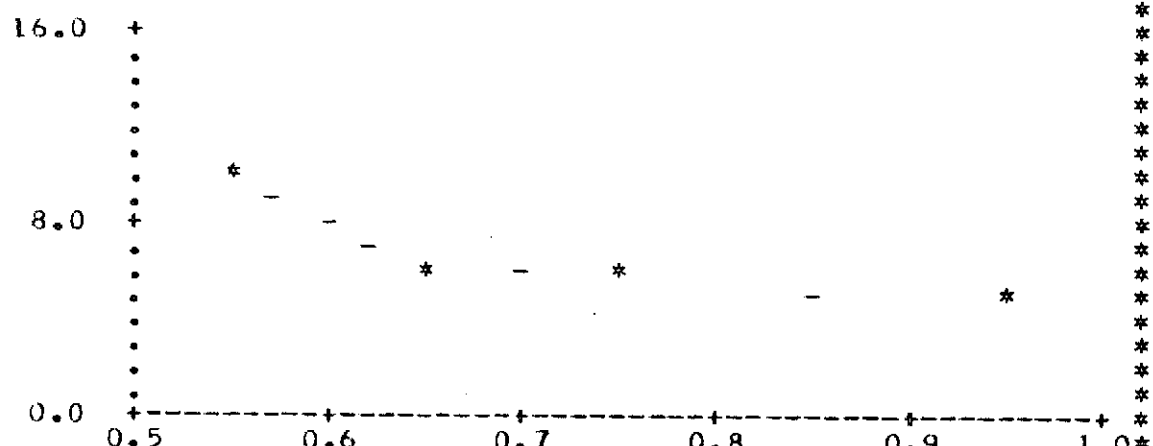
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.04 | 0.50 | .5 - .6 |
| BAND 5 | 6.13 | 0.60 | .6 - .7 |
| BAND 6 | 5.57 | 0.51 | .7 - .8 |
| BAND 7 | 4.60 | 0.55 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.326 | 0.385 | 0.305 |
| BAND 5 | 0.326 | 1.000 | 0.294 | 0.590 |
| BAND 6 | 0.385 | 0.294 | 1.000 | 0.357 |
| BAND 7 | 0.305 | 0.590 | 0.357 | 1.000 |

BAND RATIO PARAMETER -0.143
TRANSFORMED PARAMETER 0.598




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 W
IMAGE IDENTIFIER: 1181-18033
DATE ACQUIRED: 20JAN73

CELLS 2947 TO 2952
LINES 991 TO 995
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 18 DEGREES***

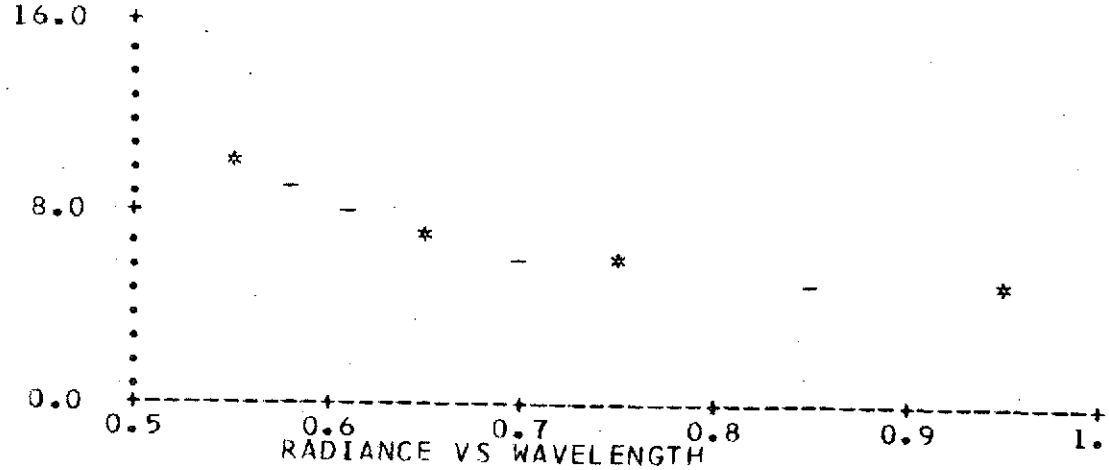
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.32 | 0.53 | .5 - .6 |
| BAND 5 | 6.56 | 0.46 | .6 - .7 |
| BAND 6 | 5.64 | 0.44 | .7 - .8 |
| BAND 7 | 4.66 | 0.54 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.560 | 0.224 | -0.197 |
| BAND 5 | 0.560 | 1.000 | 0.287 | 0.041 |
| BAND 6 | 0.224 | 0.287 | 1.000 | -0.045 |
| BAND 7 | -0.197 | 0.041 | -0.045 | 1.000 |

BAND RATIO PARAMETER -0.169
TRANSFORMED PARAMETER 0.575



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 A
IMAGE IDENTIFIER: 1270-17582
DATE ACQUIRED: 19APR73

CELLS 1481 TO 1489
LINES 1257 TO 1262
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 48 DEGREES***

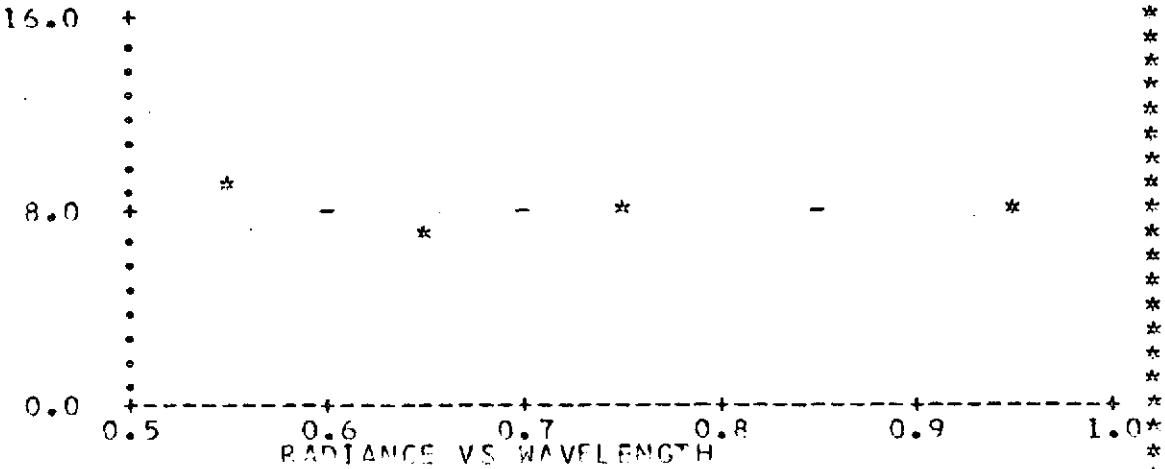
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.97 | 0.67 | .5 - .6 |
| BAND 5 | 6.71 | 0.73 | .6 - .7 |
| BAND 6 | 8.40 | 0.91 | .7 - .8 |
| BAND 7 | 8.22 | 1.12 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.839 | 0.484 | 0.342 |
| BAND 5 | 0.839 | 1.000 | 0.511 | 0.367 |
| BAND 6 | 0.484 | 0.511 | 1.000 | 0.923 |
| BAND 7 | 0.342 | 0.367 | 0.923 | 1.000 |

BAND RATIO PARAMETER 0.102
TRANSFORMED PARAMETER 0.776




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 P
IMAGE IDENTIFIER: 1270-17582
DATE ACQUIRED: 19APR73

CELLS 1505 TO 1510
LINES 1235 TO 1241
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 48 DEGREES***

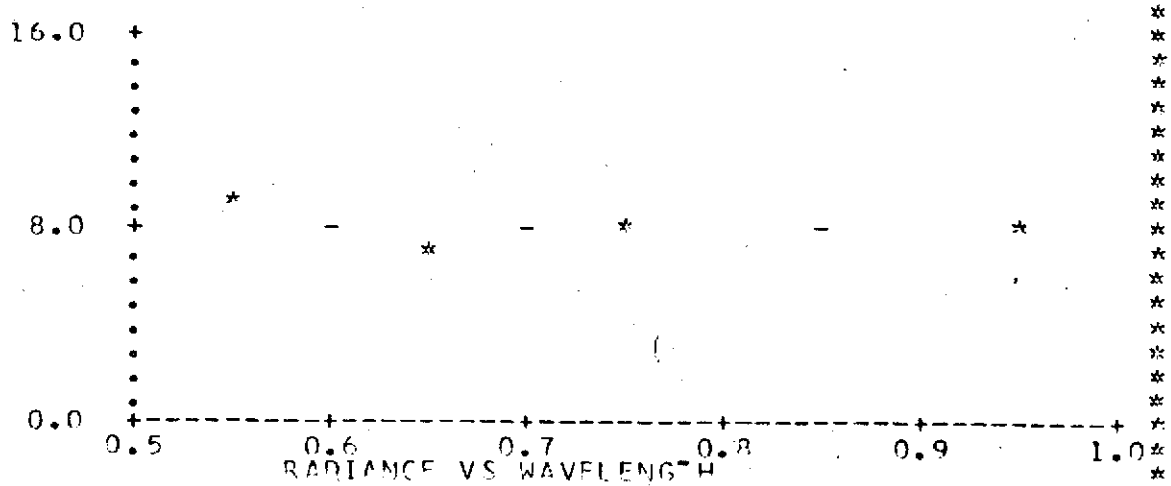
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.15 | 0.49 | .5 - .6 |
| BAND 5 | 7.09 | 0.69 | .6 - .7 |
| BAND 6 | 7.96 | 0.70 | .7 - .8 |
| BAND 7 | 7.54 | 0.93 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.774 | 0.219 | 0.099 |
| BAND 5 | 0.774 | 1.000 | -0.028 | -0.185 |
| BAND 6 | 0.219 | -0.028 | 1.000 | 0.910 |
| BAND 7 | 0.099 | -0.185 | 0.910 | 1.000 |

BAND RATIO PARAMETER 0.031
TRANSFORMED PARAMETER 0.729



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY, 20MAY74

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EPTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 W
IMAGE IDENTIFIER: 1270-17582
DATE ACQUIRED: 19APR73

CELLS 1511 TO 1514
LINES 1231 TO 1234
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 48 DEGREES***

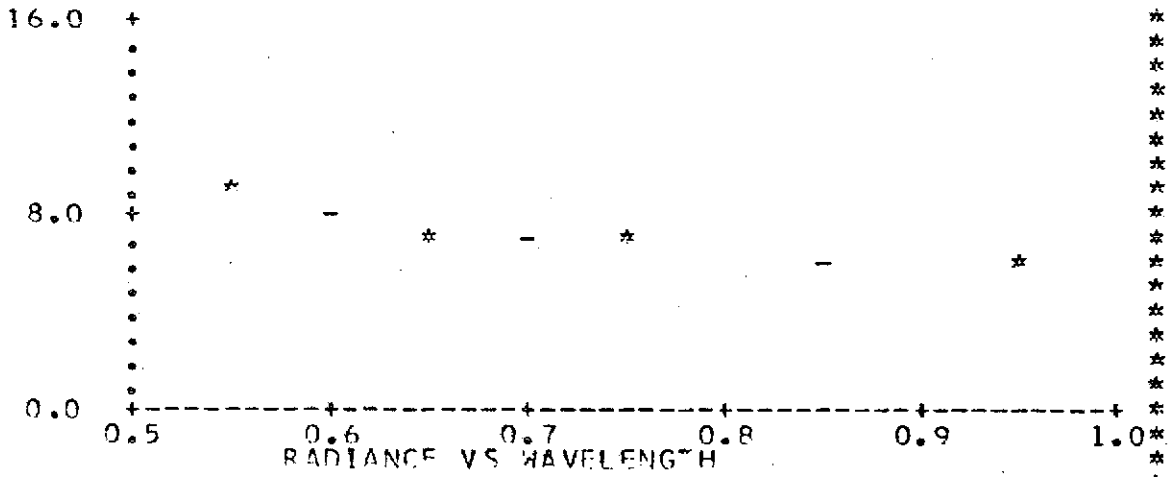
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.98 | 0.45 | .5 - .6 |
| BAND 5 | 7.05 | 0.57 | .6 - .7 |
| BAND 6 | 6.76 | 0.72 | .7 - .8 |
| BAND 7 | 6.19 | 0.80 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.708 | 0.618 | 0.632 |
| BAND 5 | 0.708 | 1.000 | 0.677 | 0.846 |
| BAND 6 | 0.618 | 0.677 | 1.000 | 0.876 |
| BAND 7 | 0.632 | 0.846 | 0.876 | 1.000 |

BAND RATIO PARAMETER -0.065
TRANSFORMED PARAMETER 0.660




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 20MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 A
IMAGE IDENTIFIER: 1360-17572
DATE ACQUIRED: 18JUL73

CELLS 1379 TO 1384
LINES 1127 TO 1134
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

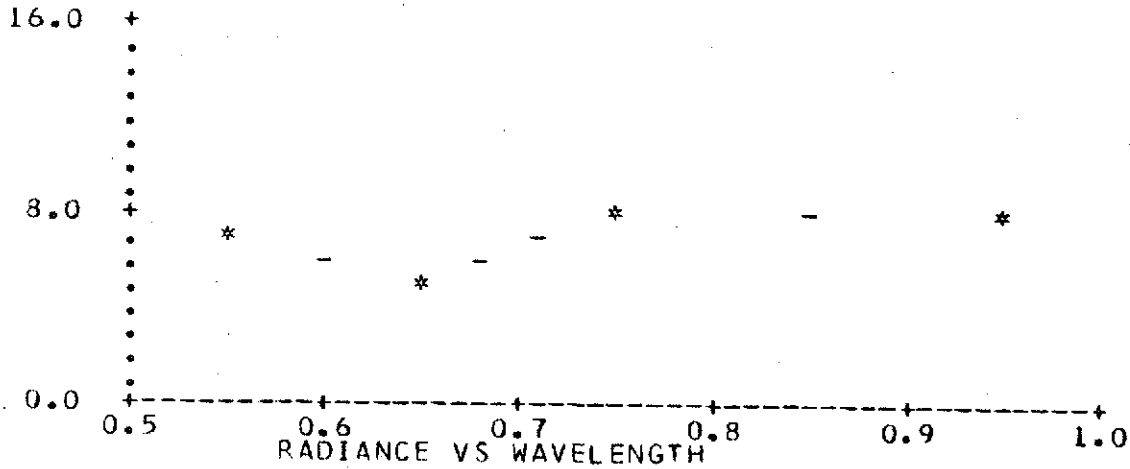
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.15 | 0.45 | .5 - .6 |
| BAND 5 | 4.95 | 0.57 | .6 - .7 |
| BAND 6 | 8.16 | 0.47 | .7 - .8 |
| BAND 7 | 8.26 | 0.50 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.659 | 0.383 | 0.259 |
| BAND 5 | 0.659 | 1.000 | 0.062 | 0.039 |
| BAND 6 | 0.383 | 0.062 | 1.000 | 0.814 |
| BAND 7 | 0.259 | 0.039 | 0.814 | 1.000 |

BAND RATIO PARAMETER 0.250
TRANSFORMED PARAMETER 0.866



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74



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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 R
IMAGE IDENTIFIER: 1360-17572
DATE ACQUIRED: 18JUL73

CELLS 1403 TO 1406
LINES 1104 TO 1110
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

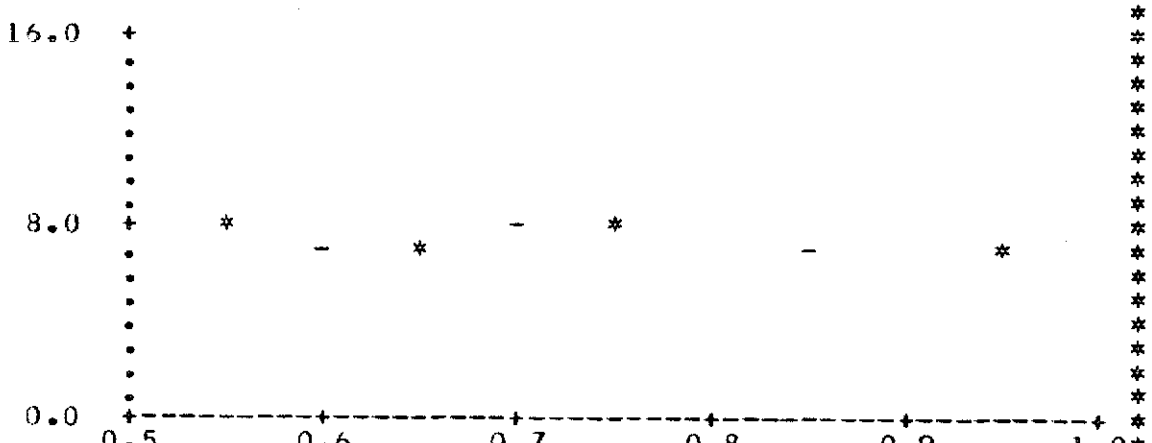
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.38 | 0.77 | .5 - .6 |
| BAND 5 | 6.76 | 1.22 | .6 - .7 |
| BAND 6 | 8.08 | 0.92 | .7 - .8 |
| BAND 7 | 7.32 | 1.06 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.902 | 0.447 | 0.079 |
| BAND 5 | 0.902 | 1.000 | 0.353 | -0.032 |
| BAND 6 | 0.447 | 0.353 | 1.000 | 0.878 |
| BAND 7 | 0.079 | -0.032 | 0.878 | 1.000 |

BAND RATIO PARAMETER 0.040
TRANSFORMED PARAMETER 0.735




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 03JAN74

# EPTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 W
IMAGE IDENTIFIER: 1360-17572
DATE ACQUIRED: 18JUL73

CELLS 1409 TO 1412
LINES 1100 TO 1104
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

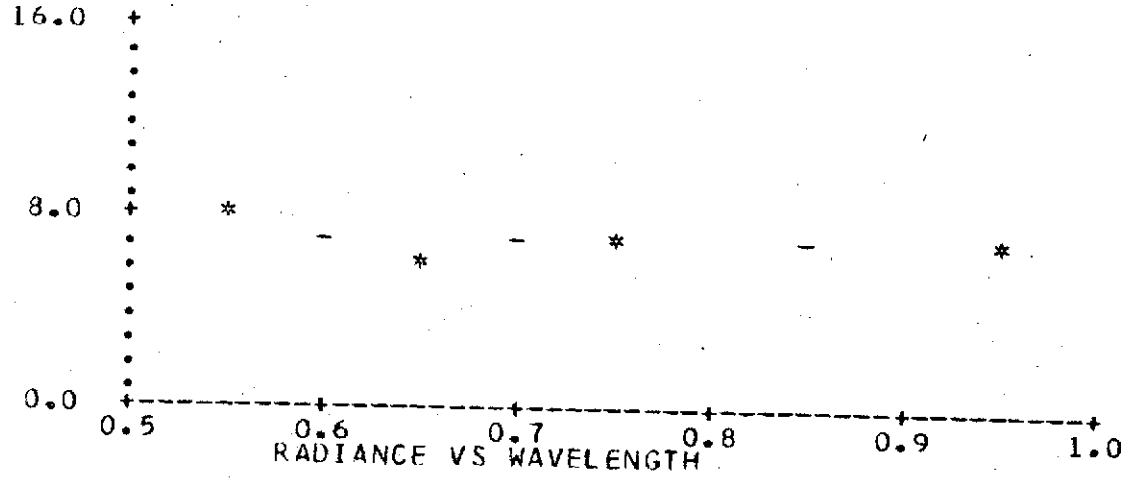
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.90 | 0.56 | .5 - .6 |
| BAND 5 | 5.96 | 0.54 | .6 - .7 |
| BAND 6 | 7.17 | 0.51 | .7 - .8 |
| BAND 7 | 6.59 | 0.82 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.901 | -0.028 | -0.114 |
| BAND 5 | 0.901 | 1.000 | 0.146 | 0.096 |
| BAND 6 | -0.028 | 0.146 | 1.000 | 0.845 |
| BAND 7 | -0.114 | 0.096 | 0.845 | 1.000 |

BAND RATIO PARAMETER 0.051
TRANSFORMED PARAMETER 0.742




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 A
IMAGE IDENTIFIER: 1415-18022
DATE ACQUIRED: 11SEP73

CELLS 3141 TO 3146
LINES 851 TO 860
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

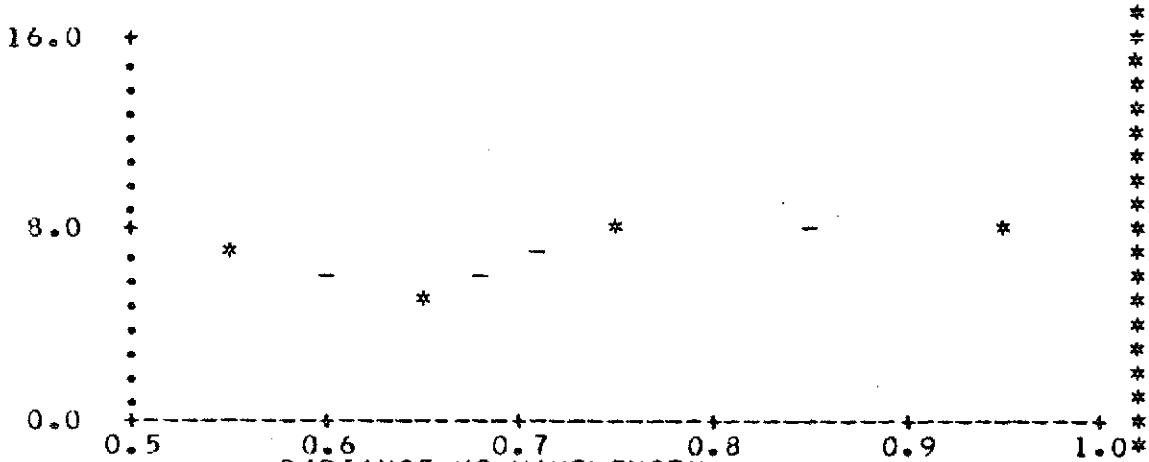
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.14 | 0.99 | .5 - .6 |
| BAND 5 | 4.63 | 0.86 | .6 - .7 |
| BAND 6 | 7.72 | 1.15 | .7 - .8 |
| BAND 7 | 7.66 | 0.86 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.877 | 0.762 | 0.621 |
| BAND 5 | 0.877 | 1.000 | 0.614 | 0.467 |
| BAND 6 | 0.762 | 0.614 | 1.000 | 0.908 |
| BAND 7 | 0.621 | 0.467 | 0.908 | 1.000 |

BAND RATIO PARAMETER 0.246
TRANSFORMED PARAMETER 0.864




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 R
IMAGE IDENTIFIER: 1415-18022
DATE ACQUIRED: 11SEP73

CELLS 3167 TO 3170
LINES 830 TO 835
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

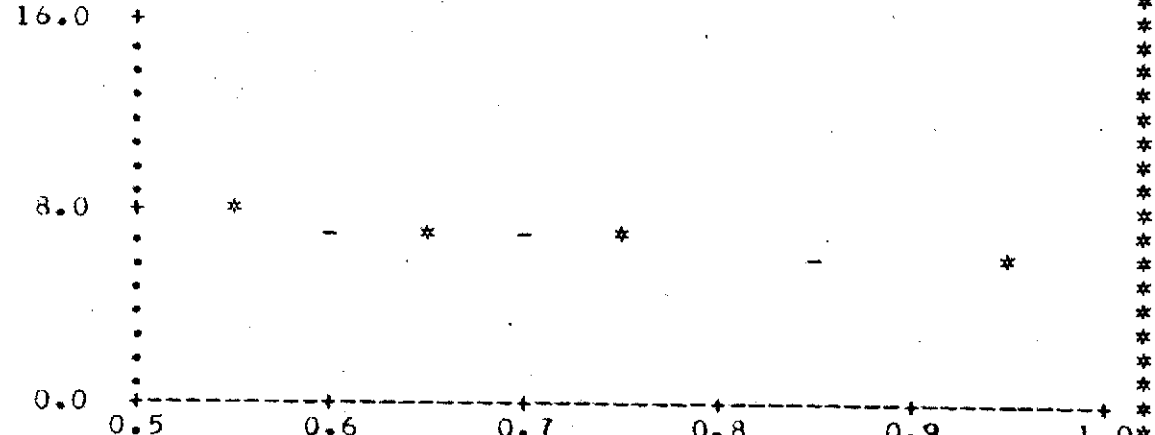
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.46 | 0.70 | .5 - .6 |
| BAND 5 | 6.98 | 0.94 | .6 - .7 |
| BAND 6 | 6.88 | 0.64 | .7 - .8 |
| BAND 7 | 5.85 | 0.70 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.872 | 0.818 | 0.795 |
| BAND 5 | 0.872 | 1.000 | 0.801 | 0.681 |
| BAND 6 | 0.818 | 0.801 | 1.000 | 0.813 |
| BAND 7 | 0.795 | 0.681 | 0.813 | 1.000 |

BAND RATIO PARAMETER -0.088
TRANSFORMED PARAMETER 0.642



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 03JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 8 W
IMAGE IDENTIFIER: 1415-18022
DATE ACQUIRED: 11SEP73

CELLS 3171 TO 3174
LINES 826 TO 829
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

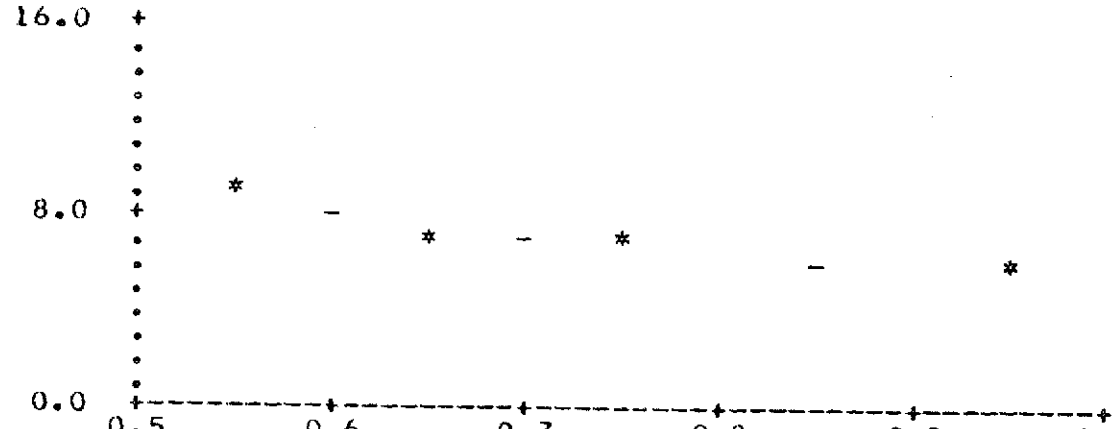
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.87 | 1.02 | .5 - .6 |
| BAND 5 | 7.30 | 1.13 | .6 - .7 |
| BAND 6 | 7.22 | 0.98 | .7 - .8 |
| BAND 7 | 6.37 | 0.71 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.938 | 0.872 | 0.552 |
| BAND 5 | 0.938 | 1.000 | 0.833 | 0.563 |
| BAND 6 | 0.872 | 0.833 | 1.000 | 0.814 |
| BAND 7 | 0.552 | 0.563 | 0.814 | 1.000 |

BAND RATIO PARAMETER -0.067
TRANSFORMED PARAMETER 0.658




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 03JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 283 TO 288
LINES 2019 TO 2024
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

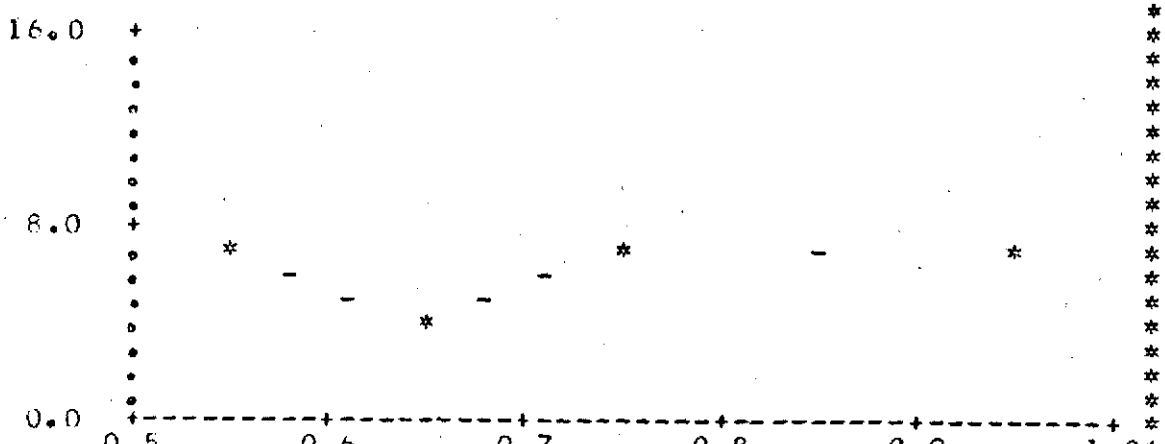
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.51 | 0.75 | .5 - .6 |
| BAND 5 | 4.39 | 1.12 | .6 - .7 |
| BAND 6 | 6.99 | 1.06 | .7 - .8 |
| BAND 7 | 6.72 | 1.40 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.896 | 0.401 | 0.249 |
| BAND 5 | 0.896 | 1.000 | 0.273 | 0.147 |
| BAND 6 | 0.401 | 0.273 | 1.000 | 0.959 |
| BAND 7 | 0.249 | 0.147 | 0.959 | 1.000 |

BAND RATIO PARAMETER 0.210
TRANSFORMED PARAMETER 0.842



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

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# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 449 TO 456
LINES 1922 TO 1933
TOTAL POINTS 96

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

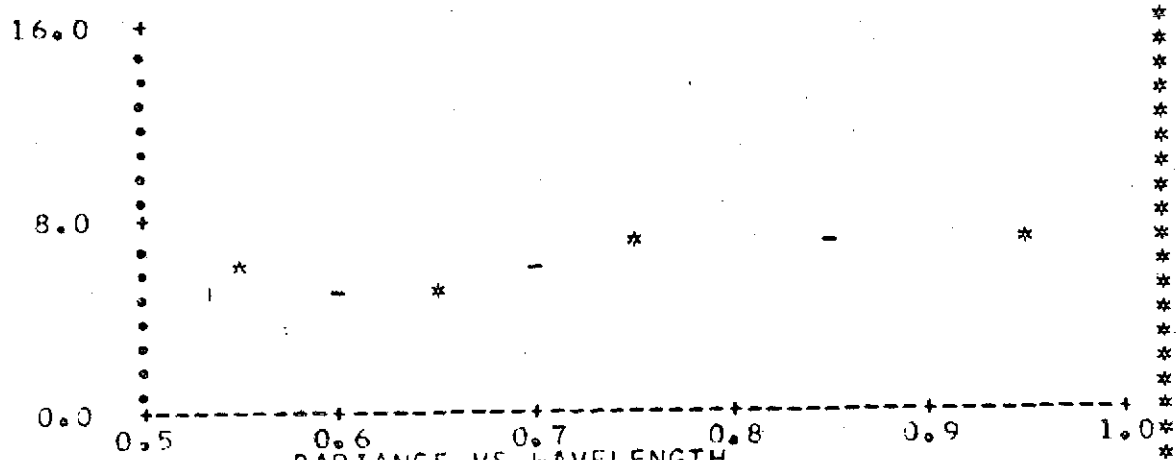
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.48 | 0.56 | .5 - .6 |
| BAND 5 | 4.50 | 0.81 | .6 - .7 |
| BAND 6 | 7.15 | 0.51 | .7 - .8 |
| BAND 7 | 7.05 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.915 | 0.531 | 0.172 |
| BAND 5 | 0.915 | 1.000 | 0.509 | 0.121 |
| BAND 6 | 0.531 | 0.509 | 1.000 | 0.752 |
| BAND 7 | 0.172 | 0.121 | 0.752 | 1.000 |

BAND RATIO PARAMETER 0.220
TRANSFORMED PARAMETER 0.849




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 453 TO 458
LINES 1933 TO 1939
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

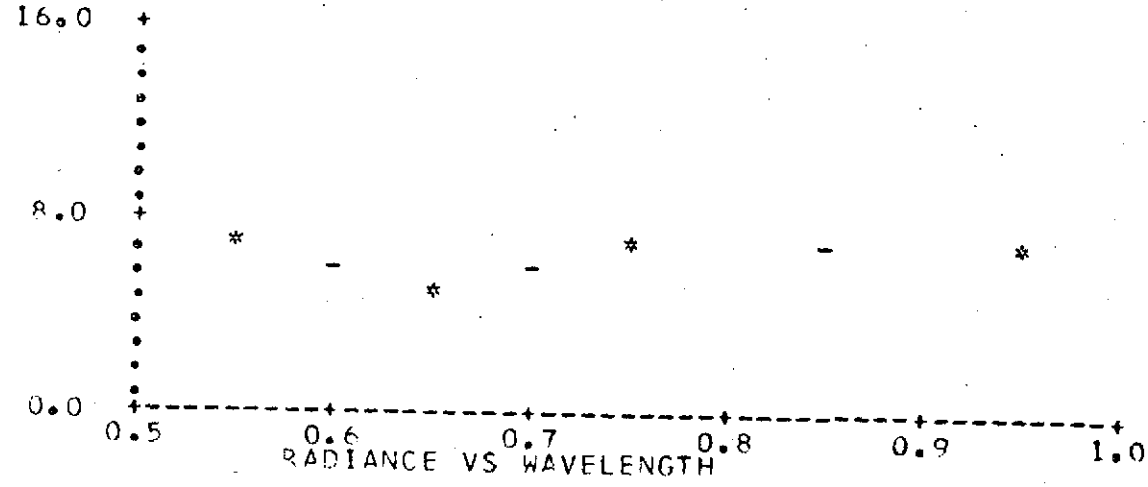
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.87 | 0.32 | .5 - .6 |
| BAND 5 | 4.97 | 0.37 | .6 - .7 |
| BAND 6 | 7.44 | 0.40 | .7 - .8 |
| BAND 7 | 7.40 | 0.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.632 | 0.566 | 0.585 |
| BAND 5 | 0.632 | 1.000 | 0.499 | 0.489 |
| BAND 6 | 0.566 | 0.499 | 1.000 | 0.772 |
| BAND 7 | 0.585 | 0.489 | 0.772 | 1.000 |

BAND RATIO PARAMETER 0.196
TRANSFORMED PARAMETER 0.834




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DATA ANALYSIS LABORATORY 27JUN73



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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 456 TO 460
LINES 1939 TO 1945
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

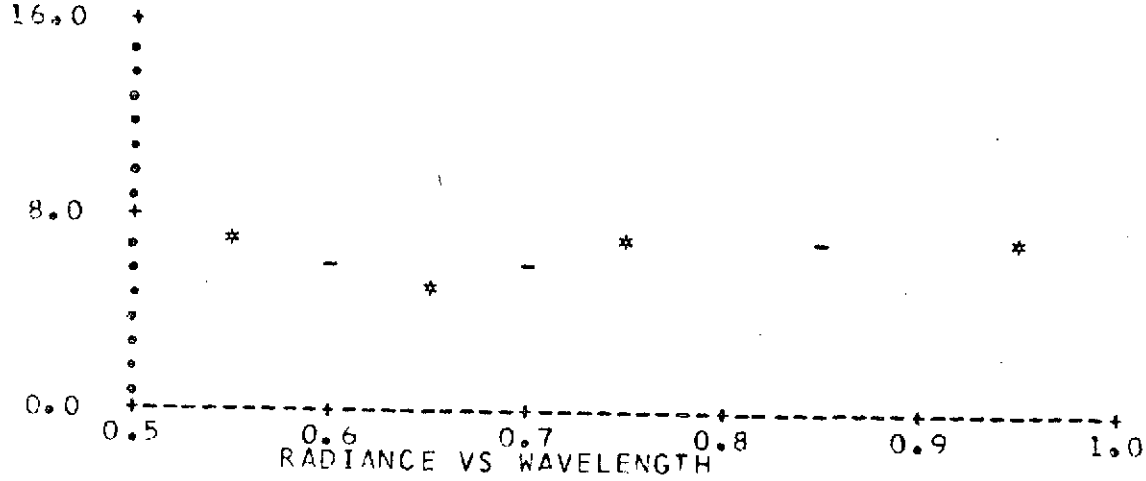
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.72 | 0.40 | .5 - .6 |
| BAND 5 | 4.84 | 0.59 | .6 - .7 |
| BAND 6 | 7.42 | 0.51 | .7 - .8 |
| BAND 7 | 7.30 | 0.55 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.822 | 0.512 | 0.601 |
| BAND 5 | 0.822 | 1.000 | 0.717 | 0.680 |
| BAND 6 | 0.512 | 0.717 | 1.000 | 0.793 |
| BAND 7 | 0.601 | 0.680 | 0.793 | 1.000 |

BAND RATIO PARAMETER 0.202
TRANSFORMED PARAMETER 0.838




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1019-18030
DATE ACQUIRED: 11AUG72

CELLS 463 TO 470
LINES 1970 TO 1978
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

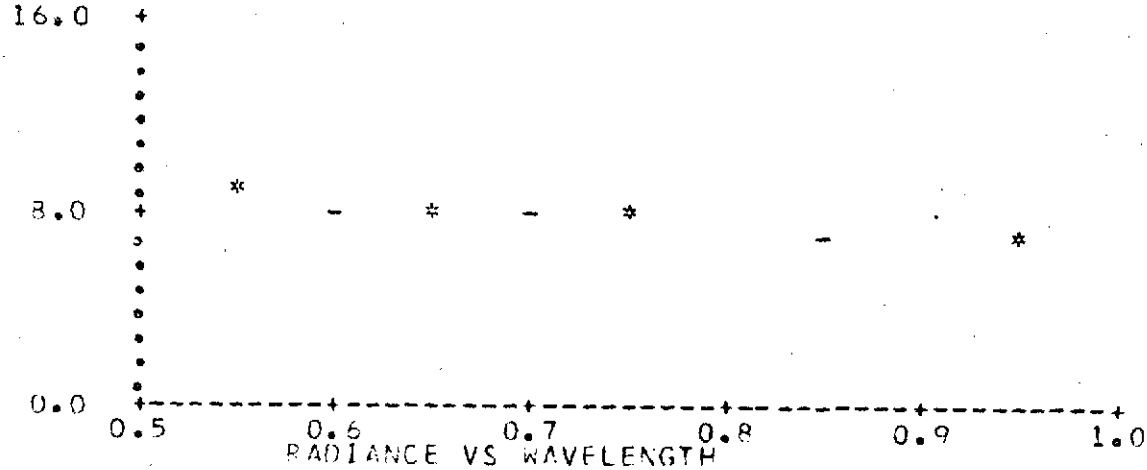
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.70 | 2.17 | .5 - .6 |
| BAND 5 | 7.68 | 3.04 | .6 - .7 |
| BAND 6 | 7.98 | 1.66 | .7 - .8 |
| BAND 7 | 6.78 | 1.00 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.988 | 0.973 | 0.953 |
| BAND 5 | 0.988 | 1.000 | 0.982 | 0.962 |
| BAND 6 | 0.973 | 0.982 | 1.000 | 0.972 |
| BAND 7 | 0.953 | 0.962 | 0.972 | 1.000 |

BAND RATIO PARAMETER -0.062
TRANSFORMED PARAMETER 0.661



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1019-13030
DATE ACQUIRED: 11AUG72

CELLS 461 TO 482
LINES 1925 TO 1939
TOTAL POINTS 330

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

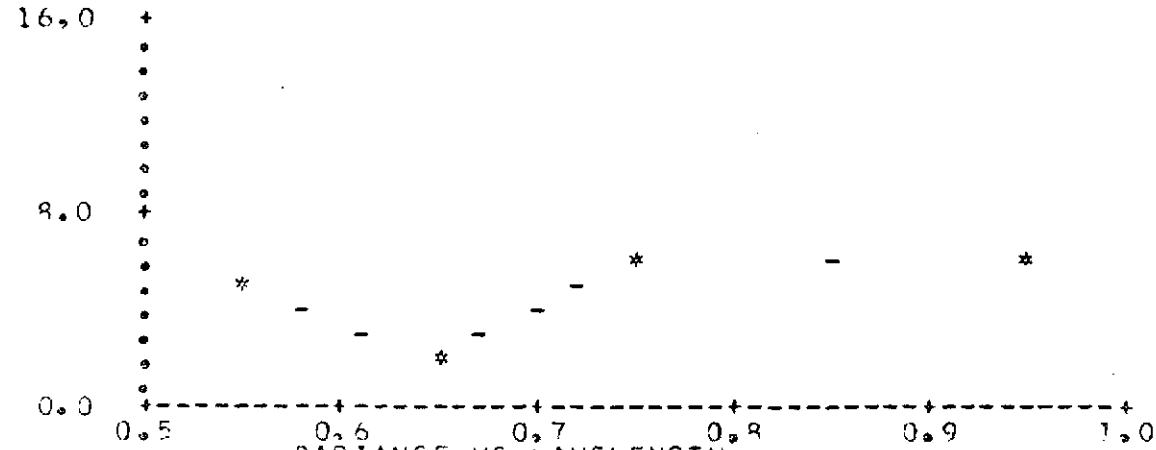
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 4.79 | 0.30 | .5 - .6 |
| BAND 5 | 2.40 | 0.32 | .6 - .7 |
| BAND 6 | 5.77 | 0.56 | .7 - .8 |
| BAND 7 | 5.95 | 0.62 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.750 | 0.467 | 0.339 |
| BAND 5 | 0.750 | 1.000 | 0.401 | 0.185 |
| BAND 6 | 0.467 | 0.401 | 1.000 | 0.859 |
| BAND 7 | 0.339 | 0.185 | 0.859 | 1.000 |

BAND RATIO PARAMETER 0.426
TRANSFORMED PARAMETER 0.962



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2035 TO 2040
LINES 702 TO 706
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

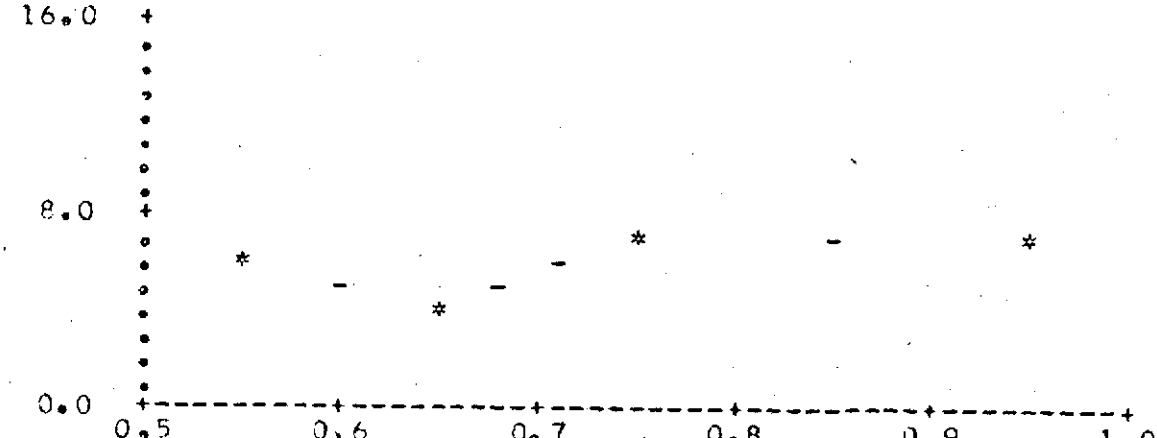
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.13 | 0.66 | .5 - .6 |
| BAND 5 | 4.01 | 0.88 | .6 - .7 |
| BAND 6 | 6.66 | 1.12 | .7 - .8 |
| BAND 7 | 6.69 | 1.48 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.930 | 0.381 | 0.141 |
| BAND 5 | 0.930 | 1.000 | 0.296 | 0.054 |
| BAND 6 | 0.381 | 0.296 | 1.000 | 0.945 |
| BAND 7 | 0.141 | 0.054 | 0.945 | 1.000 |

BAND RATIO PARAMETER 0.250
TRANSFORMED PARAMETER 0.866



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2209 TO 2212
LINES 601 TO 605
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

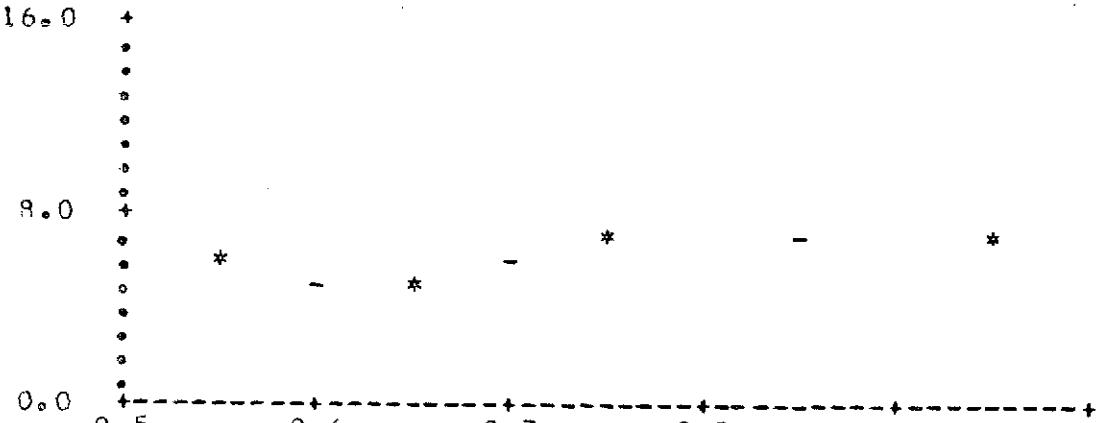
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.38 | 0.29 | .5 - .6 |
| BAND 5 | 4.85 | 0.26 | .6 - .7 |
| BAND 6 | 7.17 | 0.46 | .7 - .8 |
| BAND 7 | 7.20 | 0.52 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.520 | 0.169 | -0.011 |
| BAND 5 | 0.520 | 1.000 | 0.164 | 0.174 |
| BAND 6 | 0.169 | 0.164 | 1.000 | 0.857 |
| BAND 7 | -0.011 | 0.174 | 0.857 | 1.000 |

BAND RATIO PARAMETER 0.195
TRANSFORMED PARAMETER 0.834




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2205 TO 2212
LINES 605 TO 616
TOTAL POINTS 96

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

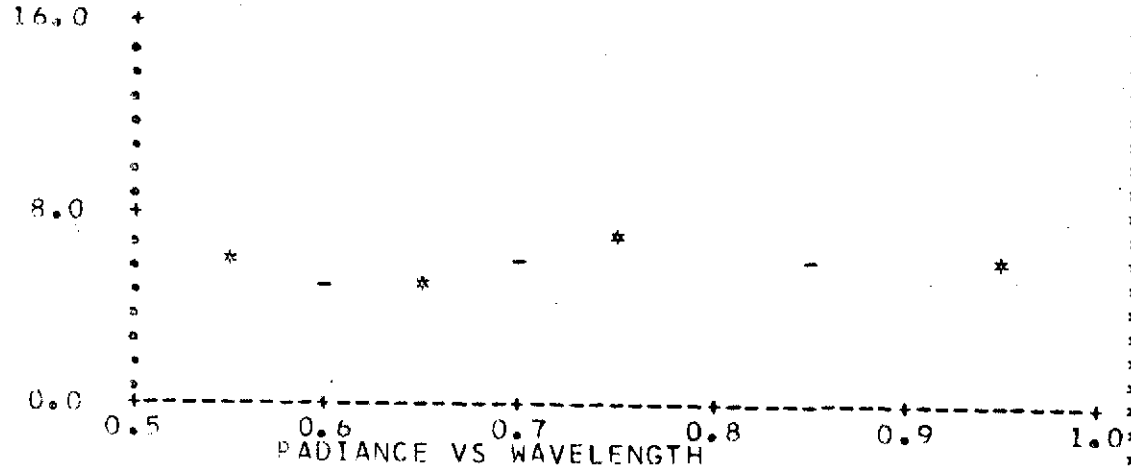
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.19 | 0.40 | .5 - .6 |
| BAND 5 | 4.54 | 0.46 | .6 - .7 |
| BAND 6 | 6.55 | 0.73 | .7 - .8 |
| BAND 7 | 6.48 | 0.83 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.790 | 0.525 | 0.482 |
| BAND 5 | 0.790 | 1.000 | 0.610 | 0.577 |
| BAND 6 | 0.525 | 0.610 | 1.000 | 0.910 |
| BAND 7 | 0.482 | 0.577 | 0.910 | 1.000 |

BAND RATIO PARAMETER 0.176
TRANSFORMED PARAMETER 0.822



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2207 TO 2214
LINES 616 TO 624
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

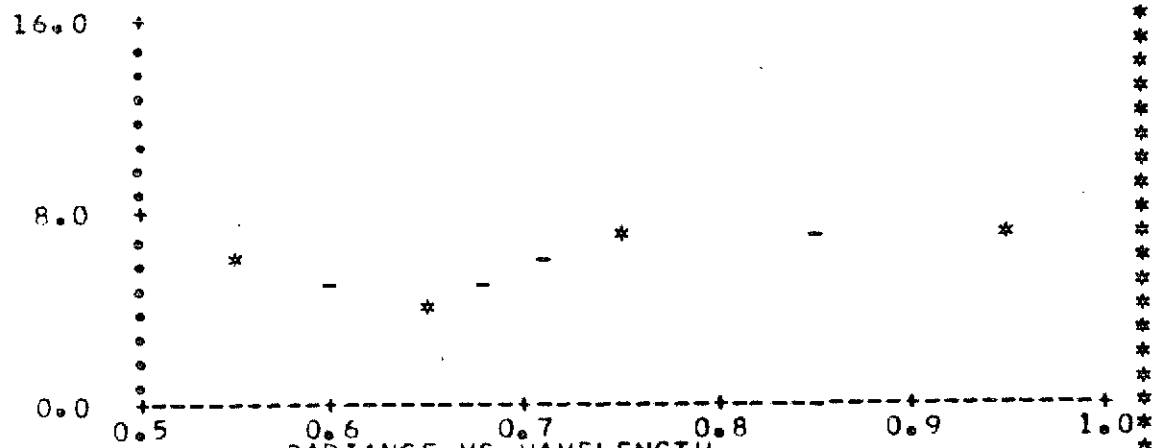
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.13 | 0.57 | .5 - .6 |
| BAND 5 | 4.38 | 0.73 | .6 - .7 |
| BAND 6 | 6.74 | 0.76 | .7 - .8 |
| BAND 7 | 6.68 | 0.79 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.912 | 0.815 | 0.747 |
| BAND 5 | 0.912 | 1.000 | 0.842 | 0.758 |
| BAND 6 | 0.815 | 0.842 | 1.000 | 0.879 |
| BAND 7 | 0.747 | 0.758 | 0.879 | 1.000 |

BAND RATIO PARAMETER 0.209
TRANSFORMED PARAMETER 0.842




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R4
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2213 TO 2216
LINES 624 TO 630
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

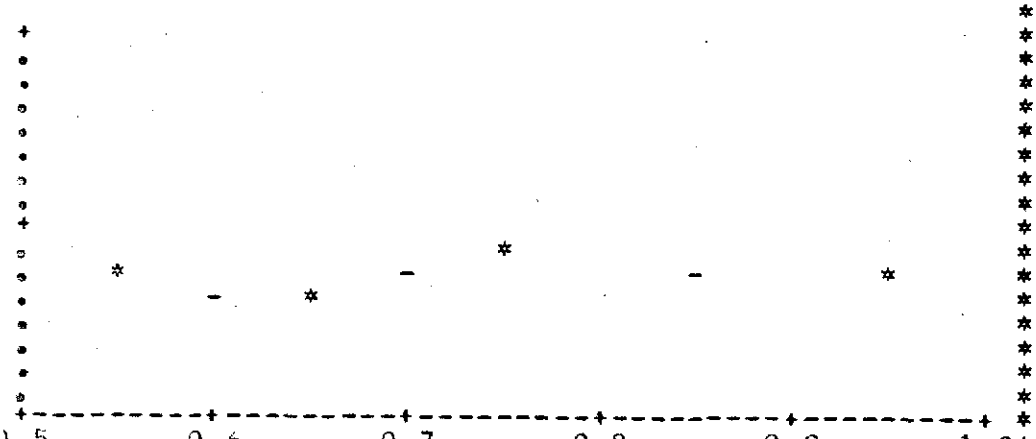
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.24 | 0.44 | .5 - .6 |
| BAND 5 | 4.55 | 0.51 | .6 - .7 |
| BAND 6 | 6.60 | 0.81 | .7 - .8 |
| BAND 7 | 6.32 | 0.80 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.769 | 0.400 | 0.306 |
| BAND 5 | 0.769 | 1.000 | 0.539 | 0.403 |
| BAND 6 | 0.400 | 0.539 | 1.000 | 0.935 |
| BAND 7 | 0.306 | 0.403 | 0.935 | 1.000 |

BAND RATIO PARAMETER 0.163
TRANSFORMED PARAMETER 0.814



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

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OF POOR QUALITY

# ERTS-1 SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2215 TO 2224
LINES 651 TO 660
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

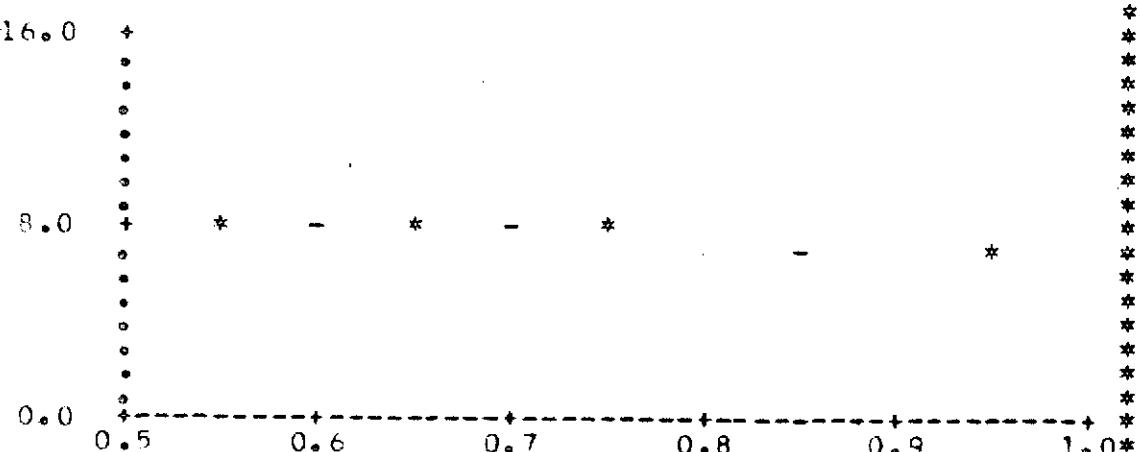
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.45 | 1.68 | .5 - .6 |
| BAND 5 | 7.56 | 2.38 | .6 - .7 |
| BAND 6 | 7.74 | 1.41 | .7 - .8 |
| BAND 7 | 6.52 | 0.89 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.978 | 0.944 | 0.901 |
| BAND 5 | 0.978 | 1.000 | 0.959 | 0.927 |
| BAND 6 | 0.944 | 0.959 | 1.000 | 0.961 |
| BAND 7 | 0.901 | 0.927 | 0.961 | 1.000 |

BAND RATIO PARAMETER -0.074
TRANSFORMED PARAMETER 0.653



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1 SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1020-18085
DATE ACQUIRED: 12AUG72

CELLS 2217 TO 2230
LINES 606 TO 616
TOTAL POINTS 154

***CORRECTED FOR SUN ELEVATION 51 DEGREES***

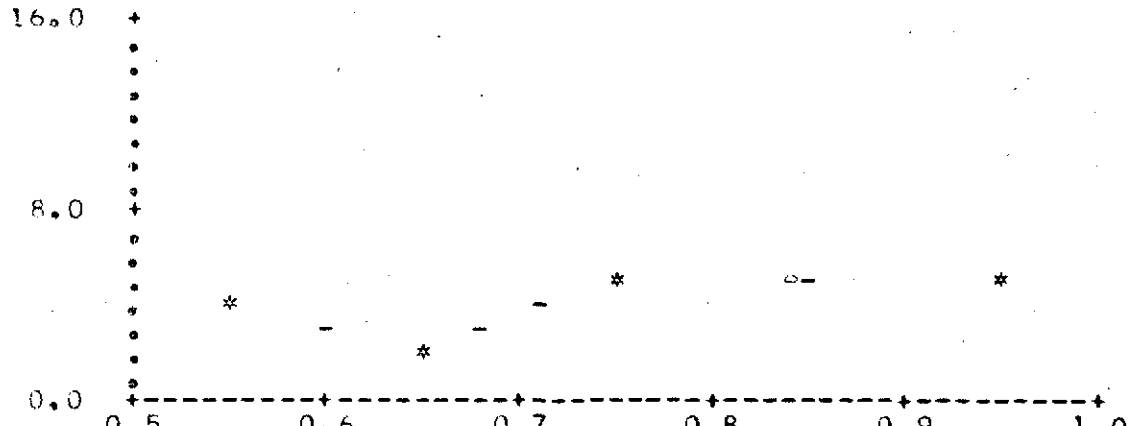
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 4.40 | 0.14 | .5 - .6 |
| BAND 5 | 2.03 | 0.14 | .6 - .7 |
| BAND 6 | 5.09 | 0.41 | .7 - .8 |
| BAND 7 | 5.32 | 0.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.269 | 0.104 | 0.144 |
| BAND 5 | 0.269 | 1.000 | 0.199 | 0.169 |
| BAND 6 | 0.104 | 0.199 | 1.000 | 0.847 |
| BAND 7 | 0.144 | 0.169 | 0.847 | 1.000 |

BAND RATIO PARAMETER 0.448
TRANSFORMED PARAMETER 0.973




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 27JUN73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1038-18084
DATE ACQUIRED: 30AUG72

CELLS 2007 TO 2010
LINES 2025 TO 2028
TOTAL POINTS 16

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

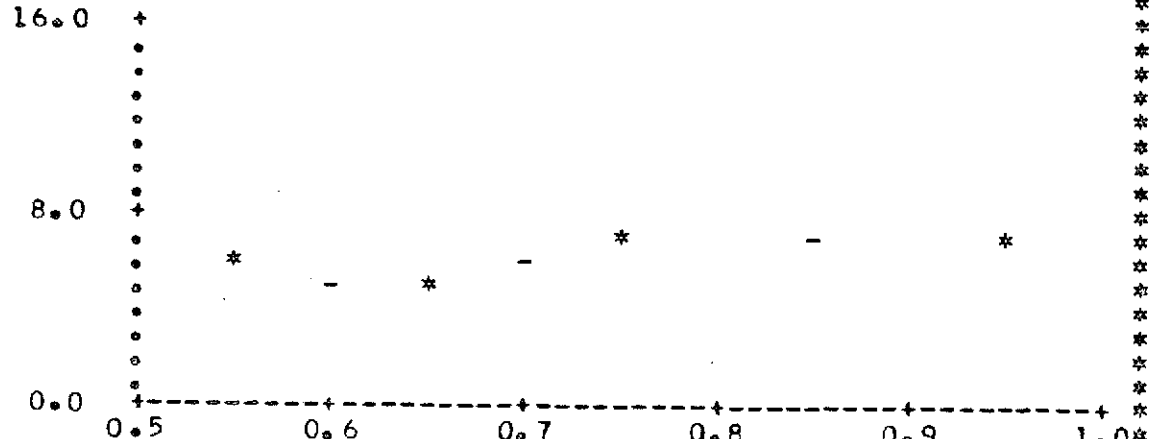
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.48 | 0.71 | .5 - .6 |
| BAND 5 | 4.54 | 1.02 | .6 - .7 |
| BAND 6 | 6.51 | 0.91 | .7 - .8 |
| BAND 7 | 6.71 | 1.00 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.932 | 0.684 | 0.464 |
| BAND 5 | 0.932 | 1.000 | 0.584 | 0.321 |
| BAND 6 | 0.684 | 0.584 | 1.000 | 0.915 |
| BAND 7 | 0.464 | 0.321 | 0.915 | 1.000 |

BAND RATIO PARAMETER 0.193
TRANSFORMED PARAMETER 0.832




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1038-18084
DATE ACQUIRED: 30AUG72

CELLS 2177 TO 2182
LINES 1929 TO 1937
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

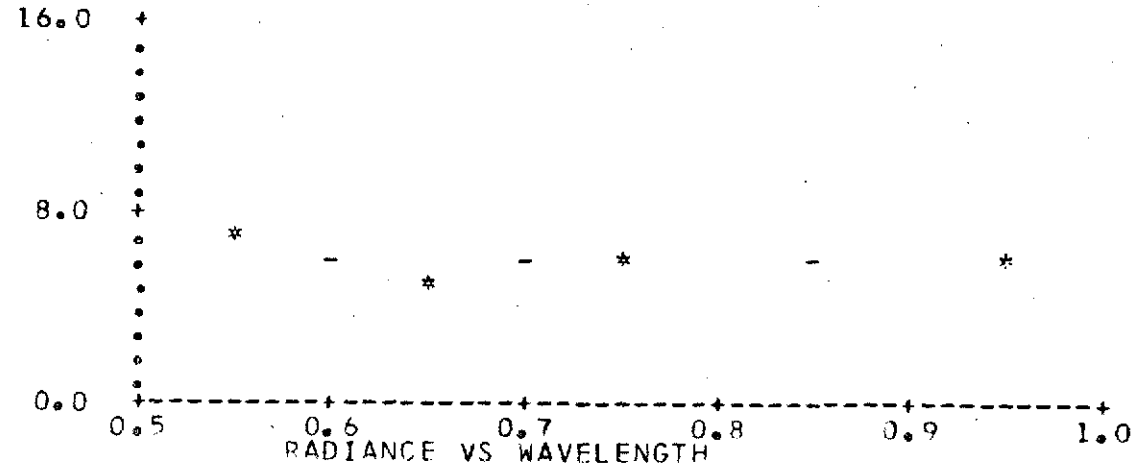
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.84 | 0.22 | .5 - .6 |
| BAND 5 | 5.04 | 0.30 | .6 - .7 |
| BAND 6 | 6.23 | 0.39 | .7 - .8 |
| BAND 7 | 6.18 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.498 | -0.150 | -0.054 |
| BAND 5 | 0.498 | 1.000 | 0.101 | 0.195 |
| BAND 6 | -0.150 | 0.101 | 1.000 | 0.742 |
| BAND 7 | -0.054 | 0.195 | 0.742 | 1.000 |

BAND RATIO PARAMETER 0.101
TRANSFORMED PARAMETER 0.776



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13JUN73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2 CELLS 2179 TO 2184
IMAGE IDENTIFIER: 1038-18084 LINES 1937 TO 1946
DATE ACQUIRED: 30AUG72 TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

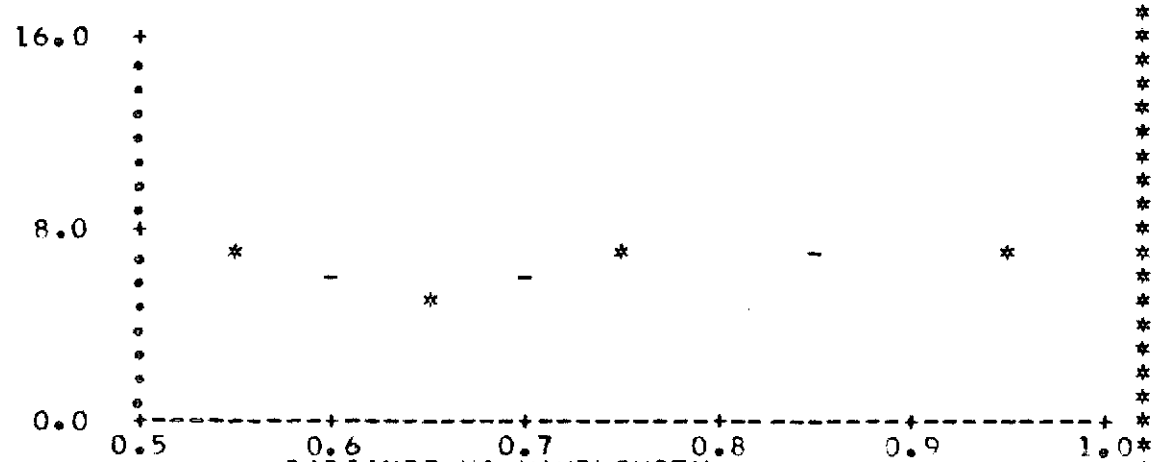
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.76 | 0.56 | .5 - .6 |
| BAND 5 | 4.94 | 0.74 | .6 - .7 |
| BAND 6 | 6.58 | 0.68 | .7 - .8 |
| BAND 7 | 6.51 | 0.69 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.901 | 0.773 | 0.647 |
| BAND 5 | 0.901 | 1.000 | 0.799 | 0.717 |
| BAND 6 | 0.773 | 0.799 | 1.000 | 0.864 |
| BAND 7 | 0.647 | 0.717 | 0.864 | 1.000 |

BAND RATIO PARAMETER 0.137
TRANSFORMED PARAMETER 0.798



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13JUN73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1038-18084
DATE ACQUIRED: 30AUG72

CELLS 2183 TO 2188
LINES 1946 TO 1952
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

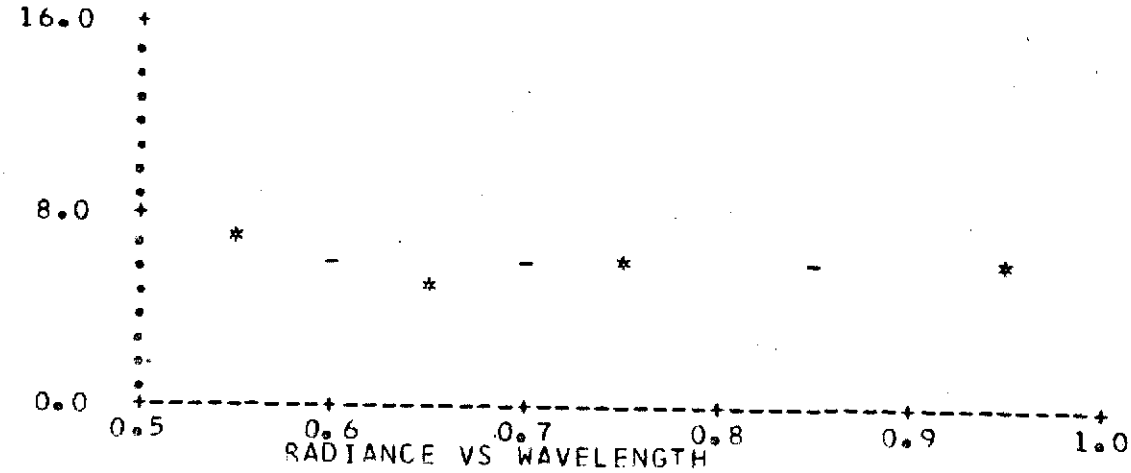
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.63 | 0.58 | .5 - .6 |
| BAND 5 | 4.65 | 0.76 | .6 - .7 |
| BAND 6 | 6.18 | 0.83 | .7 - .8 |
| BAND 7 | 6.10 | 0.89 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.925 | 0.685 | 0.650 |
| BAND 5 | 0.925 | 1.000 | 0.782 | 0.732 |
| BAND 6 | 0.685 | 0.782 | 1.000 | 0.922 |
| BAND 7 | 0.650 | 0.732 | 0.922 | 1.000 |

BAND RATIO PARAMETER 0.134
TRANSFORMED PARAMETER 0.797




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13JUN73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1038-18084
DATE ACQUIRED: 30AUG72

CELLS 2187 TO 2194
LINES 1975 TO 1984
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

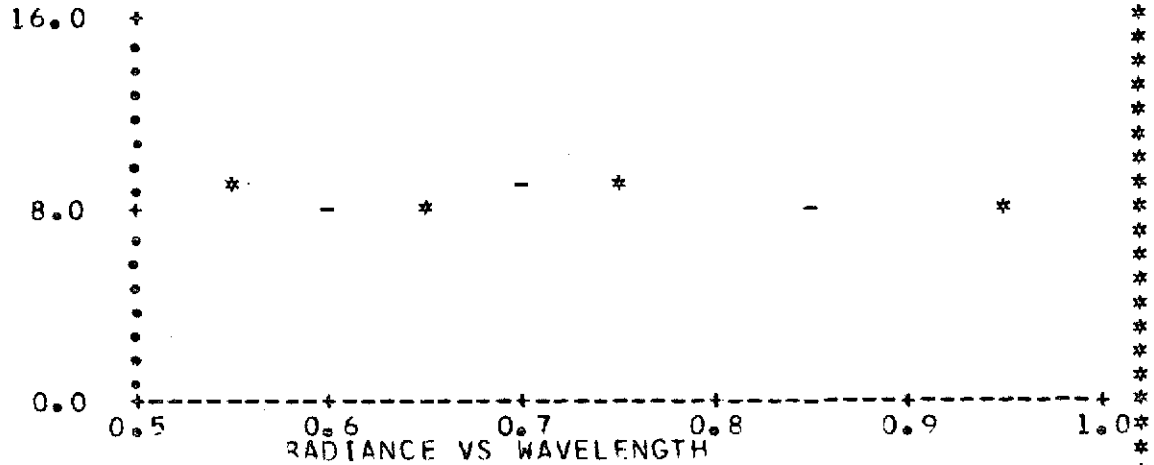
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.19 | 0.87 | .5 - .6 |
| BAND 5 | 7.82 | 1.12 | .6 - .7 |
| BAND 6 | 8.58 | 0.77 | .7 - .8 |
| BAND 7 | 7.59 | 0.71 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.887 | 0.627 | 0.369 |
| BAND 5 | 0.887 | 1.000 | 0.537 | 0.242 |
| BAND 6 | 0.627 | 0.537 | 1.000 | 0.871 |
| BAND 7 | 0.369 | 0.242 | 0.871 | 1.000 |

BAND RATIO PARAMETER -0.015
TRANSFORMED PARAMETER 0.697




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13JUN73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1038-18084
DATE ACQUIRED: 30AUG72

CELLS 2191 TO 2204
LINES 1928 TO 1939
TOTAL POINTS 168

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

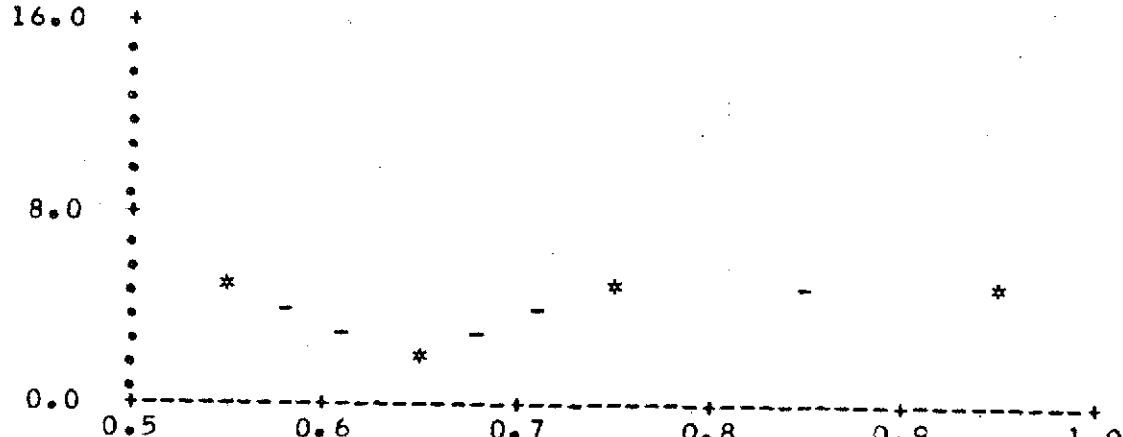
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 4.66 | 0.22 | .5 - .6 |
| BAND 5 | 2.22 | 0.13 | .6 - .7 |
| BAND 6 | 4.99 | 0.40 | .7 - .8 |
| BAND 7 | 5.27 | 0.50 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | -0.047 | -0.084 | -0.093 |
| BAND 5 | -0.047 | 1.000 | 0.166 | 0.160 |
| BAND 6 | -0.084 | 0.166 | 1.000 | 0.840 |
| BAND 7 | -0.093 | 0.160 | 0.840 | 1.000 |

BAND RATIO PARAMETER 0.407
TRANSFORMED PARAMETER 0.952



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1074-18085
DATE ACQUIRED: 050CT72

CELLS 1931 TO 1934
LINES 2075 TO 2080
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

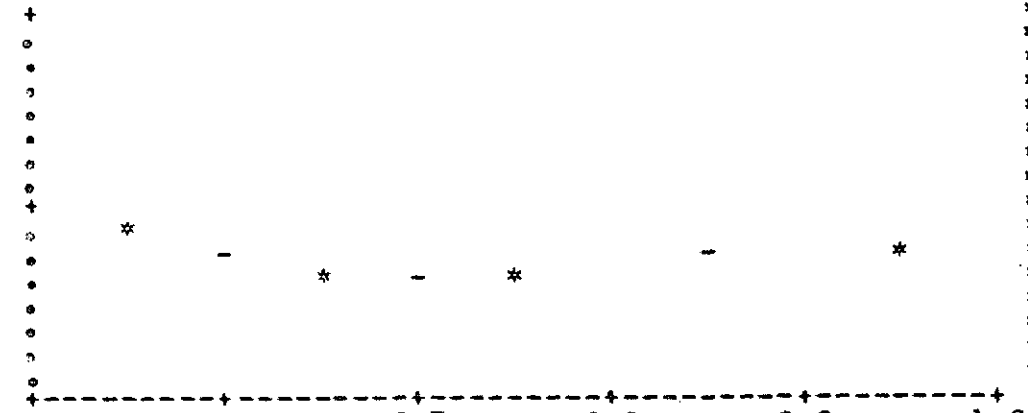
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.38 | 1.01 | .5 - .6 |
| BAND 5 | 5.05 | 1.25 | .6 - .7 |
| BAND 6 | 4.73 | 1.53 | .7 - .8 |
| BAND 7 | 5.52 | 1.19 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.939 | 0.088 | 0.704 |
| BAND 5 | 0.939 | 1.000 | 0.210 | 0.701 |
| BAND 6 | 0.088 | 0.210 | 1.000 | 0.282 |
| BAND 7 | 0.704 | 0.701 | 0.282 | 1.000 |

BAND RATIO PARAMETER 0.045
TRANSFORMED PARAMETER 0.738



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02AUG73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1074-18085
DATE ACQUIRED: 050CT72

CELLS 2101 TO 2106
LINES 1983 TO 1993
TOTAL POINTS 66

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

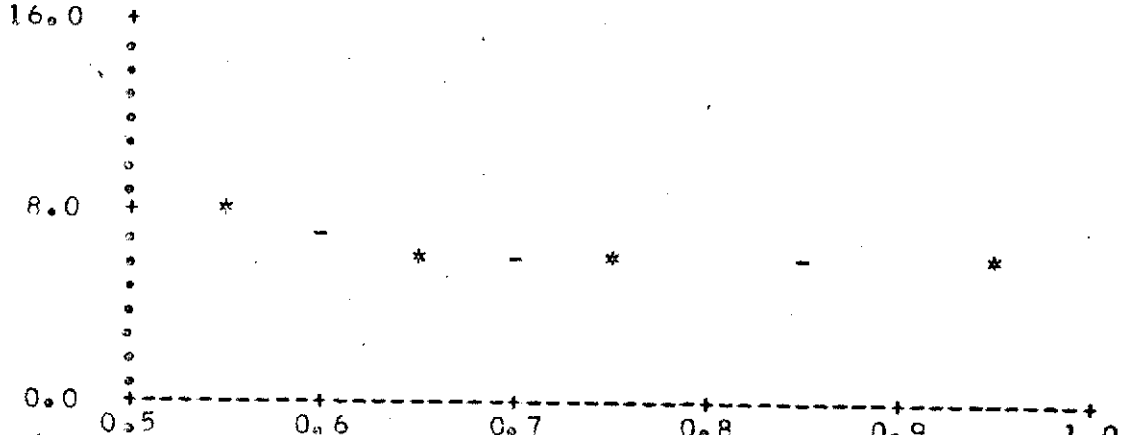
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.18 | 0.51 | .5 - .6 |
| BAND 5 | 6.09 | 0.48 | .6 - .7 |
| BAND 6 | 6.11 | 3.32 | .7 - .8 |
| BAND 7 | 6.26 | 0.69 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.705 | 0.101 | 0.543 |
| BAND 5 | 0.705 | 1.000 | 0.067 | 0.786 |
| BAND 6 | 0.101 | 0.067 | 1.000 | 0.106 |
| BAND 7 | 0.543 | 0.786 | 0.106 | 1.000 |

BAND RATIO PARAMETER 0.014
TRANSFORMED PARAMETER 0.717



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02AUG73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2 CELLS 2103 TO 2106
IMAGE IDENTIFIER: 1074-18085 LINES 1993 TO 2000
DATE ACQUIRED: 050CT72 TOTAL POINTS 32

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

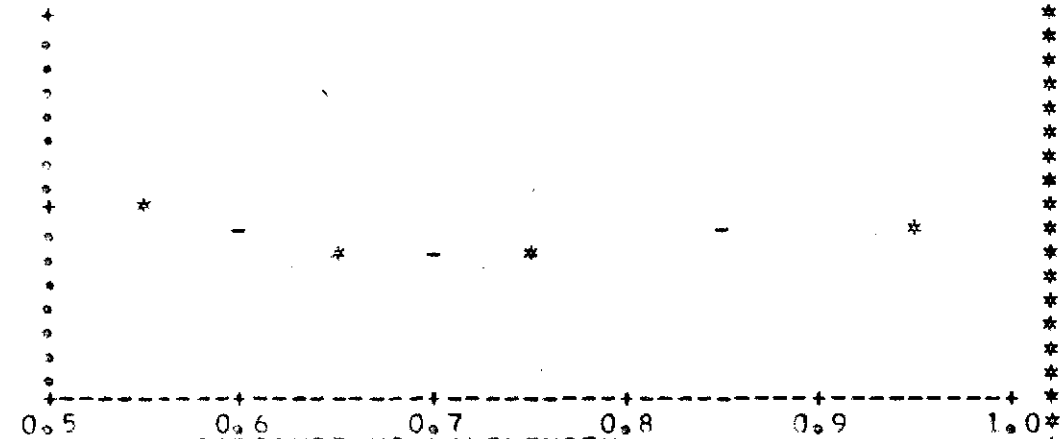
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.48 | 0.71 | .5 - .6 |
| BAND 5 | 6.37 | 0.83 | .6 - .7 |
| BAND 6 | 5.86 | 1.52 | .7 - .8 |
| BAND 7 | 7.02 | 0.53 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.854 | 0.299 | 0.812 |
| BAND 5 | 0.854 | 1.000 | 0.209 | 0.844 |
| BAND 6 | 0.299 | 0.209 | 1.000 | 0.120 |
| BAND 7 | 0.812 | 0.844 | 0.120 | 1.000 |

BAND RATIO PARAMETER 0.048
TRANSFORMED PARAMETER 0.740




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02AUG73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 P3
IMAGE IDENTIFIER: 1074-18085
DATE ACQUIRED: 050CT72

CELLS 2107 TO 2110
LINES 2000 TO 2006
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

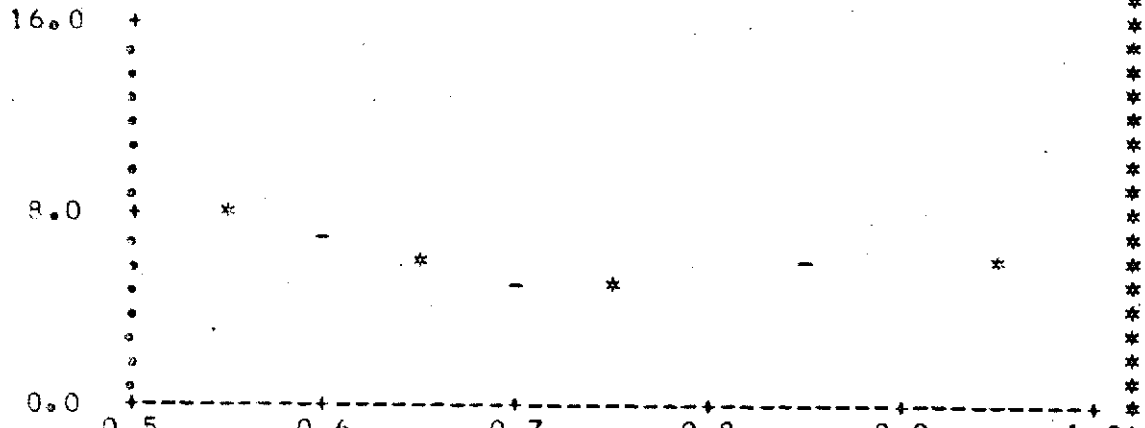
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.33 | 0.52 | .5 - .6 |
| BAND 5 | 6.34 | 0.57 | .6 - .7 |
| BAND 6 | 5.39 | 2.80 | .7 - .8 |
| BAND 7 | 6.50 | 0.78 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.783 | 0.159 | 0.541 |
| BAND 5 | 0.783 | 1.000 | 0.175 | 0.796 |
| BAND 6 | 0.159 | 0.175 | 1.000 | 0.045 |
| BAND 7 | 0.541 | 0.796 | 0.045 | 1.000 |

BAND RATIO PARAMETER 0.013
TRANSFORMED PARAMETER 0.716




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1074-18085
DATE ACQUIRED: 05OCT72

CELLS 2113 TO 2118
LINES 2033 TO 2040
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

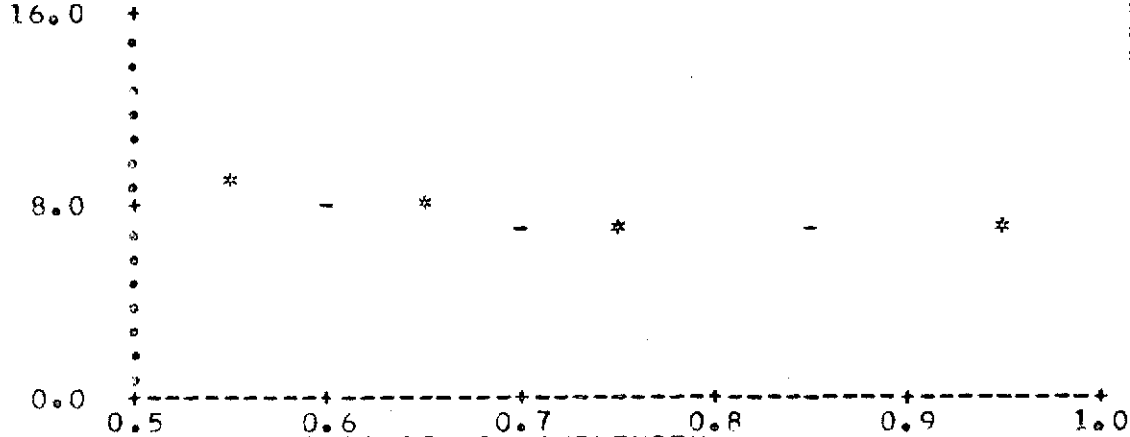
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.49 | 0.80 | .5 - .6 |
| BAND 5 | 7.70 | 1.03 | .6 - .7 |
| BAND 6 | 7.24 | 1.65 | .7 - .8 |
| BAND 7 | 7.21 | 0.80 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.905 | 0.287 | 0.795 |
| BAND 5 | 0.905 | 1.000 | 0.220 | 0.762 |
| BAND 6 | 0.287 | 0.220 | 1.000 | 0.439 |
| BAND 7 | 0.795 | 0.762 | 0.439 | 1.000 |

BAND RATIO PARAMETER -0.033
TRANSFORMED PARAMETER 0.683




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02AUG73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1074-18085
DATE ACQUIRED: 05OCT72

CELLS 2115 TO 2134
LINES 1988 TO 2001
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

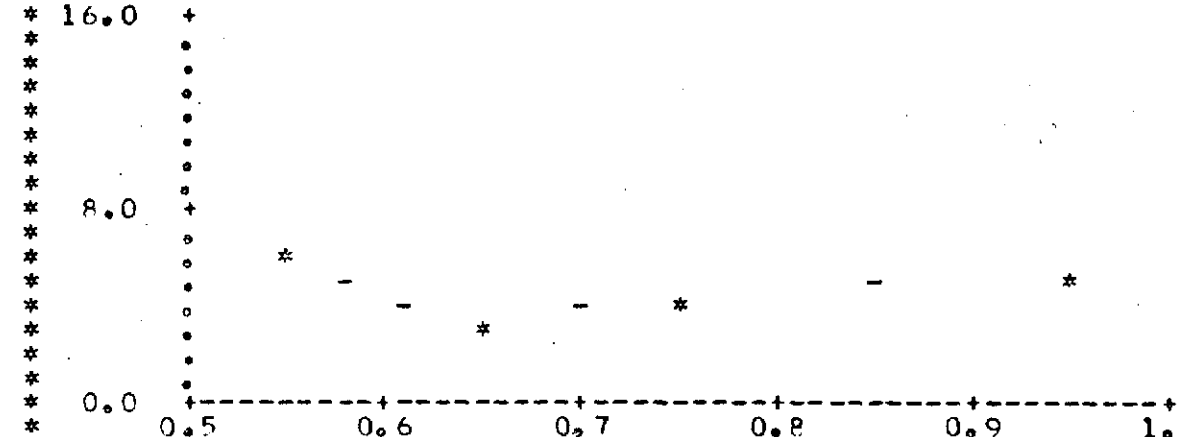
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 5.61 | 0.33 | .5 - .6 |
| BAND 5 | 2.55 | 0.36 | .6 - .7 |
| BAND 6 | 3.71 | 1.86 | .7 - .8 |
| BAND 7 | 5.10 | 0.69 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.538 | 0.001 | 0.385 |
| BAND 5 | 0.538 | 1.000 | 0.281 | 0.429 |
| BAND 6 | 0.001 | 0.281 | 1.000 | 0.380 |
| BAND 7 | 0.385 | 0.429 | 0.380 | 1.000 |

BAND RATIO PARAMETER 0.333
TRANSFORMED PARAMETER 0.913




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02AUG73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1218-18094
DATE ACQUIRED: 26FEB73

CELLS 2203 TO 2206
LINES 1941 TO 1947
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

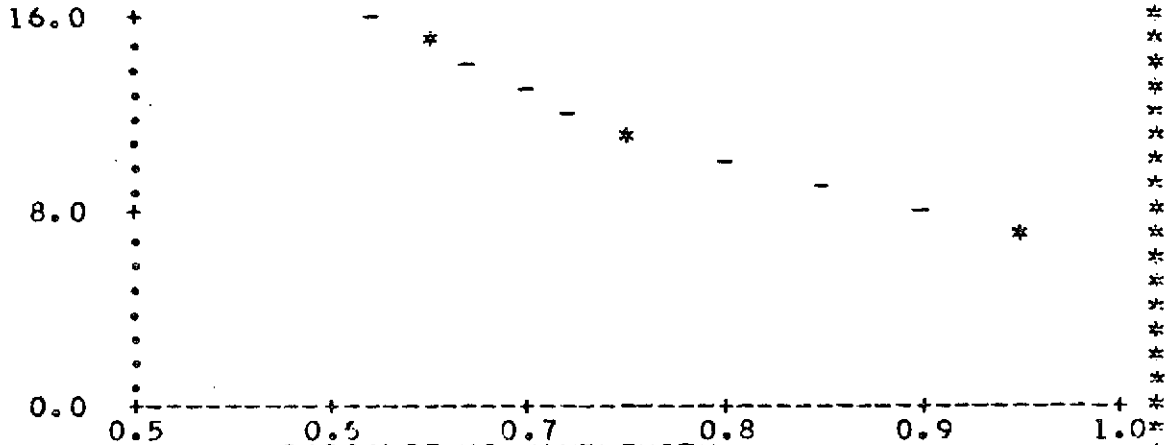
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 19.24 | 6.99 | .5 - .6 |
| BAND 5 | 14.93 | 5.56 | .6 - .7 |
| BAND 6 | 11.35 | 4.17 | .7 - .8 |
| BAND 7 | 7.13 | 2.12 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.992 | 0.988 | 0.948 |
| BAND 5 | 0.992 | 1.000 | 0.990 | 0.956 |
| BAND 6 | 0.988 | 0.990 | 1.000 | 0.970 |
| BAND 7 | 0.948 | 0.956 | 0.970 | 1.000 |

BAND RATIO PARAMETER -0.353
TRANSFORMED PARAMETER 0.383




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 P1
IMAGE IDENTIFIER: 1218-18094
DATE ACQUIRED: 26FEB73

CELLS 2375 TO 2380
LINES 1851 TO 1862
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

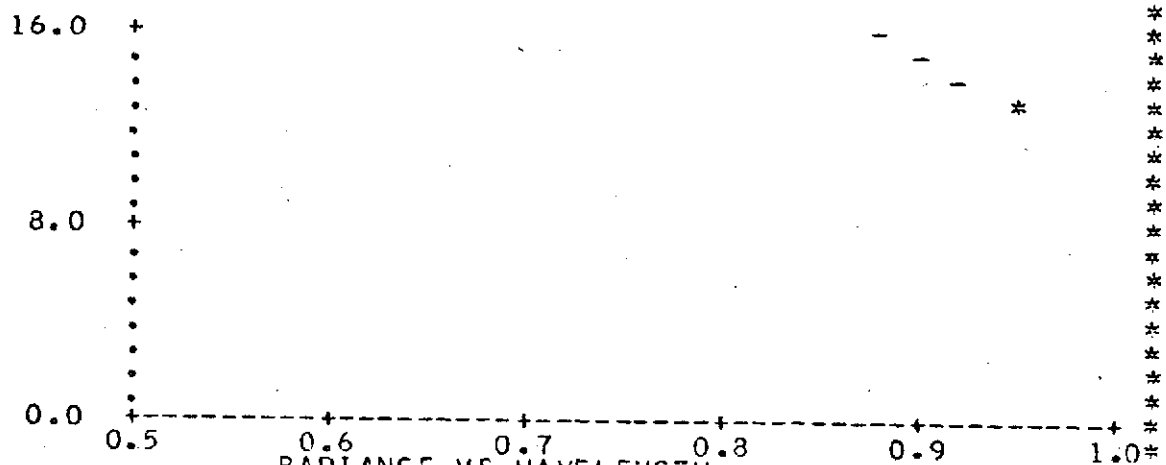
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 37.27 | 7.45 | .5 - .6 |
| BAND 5 | 29.74 | 6.30 | .6 - .7 |
| BAND 6 | 21.90 | 4.70 | .7 - .8 |
| BAND 7 | 12.62 | 2.64 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.987 | 0.988 | 0.986 |
| BAND 5 | 0.987 | 1.000 | 0.989 | 0.988 |
| BAND 6 | 0.988 | 0.989 | 1.000 | 0.993 |
| BAND 7 | 0.986 | 0.988 | 0.993 | 1.000 |

BAND RATIO PARAMETER -0.404
TRANSFORMED PARAMETER 0.310




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13MAY74

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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9R2
IMAGE IDENTIFIER: 1218-18094
DATE ACQUIRED: 26FEB73

CELLS 2381 TO 2384
LINES 1860 TO 1866
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

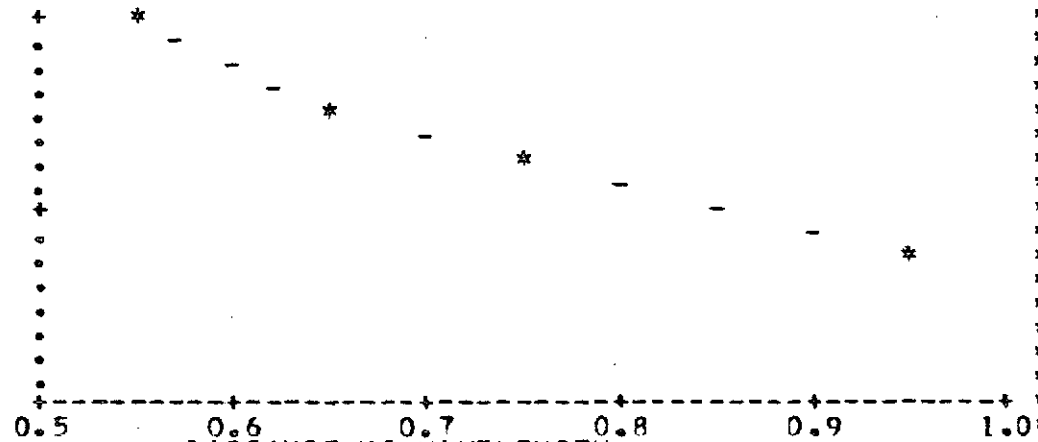
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 16.45 | 8.45 | .5 - .6 |
| BAND 5 | 11.80 | 7.42 | .6 - .7 |
| BAND 6 | 9.74 | 4.63 | .7 - .8 |
| BAND 7 | 6.30 | 2.25 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.994 | 0.984 | 0.958 |
| BAND 5 | 0.994 | 1.000 | 0.991 | 0.971 |
| BAND 6 | 0.984 | 0.991 | 1.000 | 0.984 |
| BAND 7 | 0.958 | 0.971 | 0.984 | 1.000 |

BAND RATIO PARAMETER -0.304
TRANSFORMED PARAMETER 0.443




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 24MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1218-18094
DATE ACQUIRED: 26FEB73

CELLS 2383 TO 2384
LINES 1870 TO 1879
TOTAL POINTS 20

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

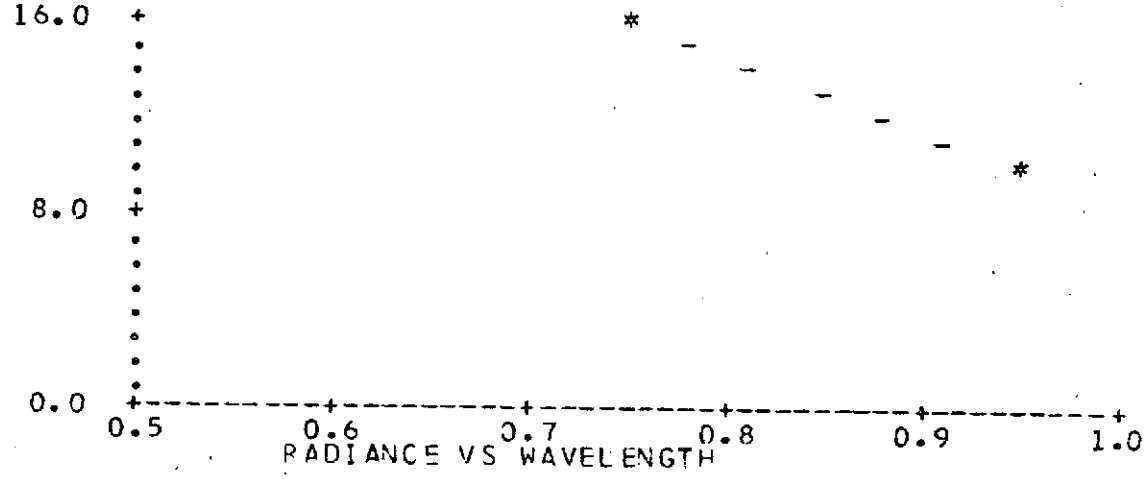
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 28.37 | 6.45 | .5 - .6 |
| BAND 5 | 22.22 | 5.80 | .6 - .7 |
| BAND 6 | 16.46 | 4.11 | .7 - .8 |
| BAND 7 | 9.78 | 2.29 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.988 | 0.989 | 0.985 |
| BAND 5 | 0.988 | 1.000 | 0.994 | 0.981 |
| BAND 6 | 0.989 | 0.994 | 1.000 | 0.986 |
| BAND 7 | 0.985 | 0.981 | 0.986 | 1.000 |

BAND RATIO PARAMETER -0.389
TRANSFORMED PARAMETER 0.333




PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13MAY74



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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1218-18094
DATE ACQUIRED: 26FEB73

CELLS 2385 TO 2392
LINES 1900 TO 1900
TOTAL POINTS 8

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

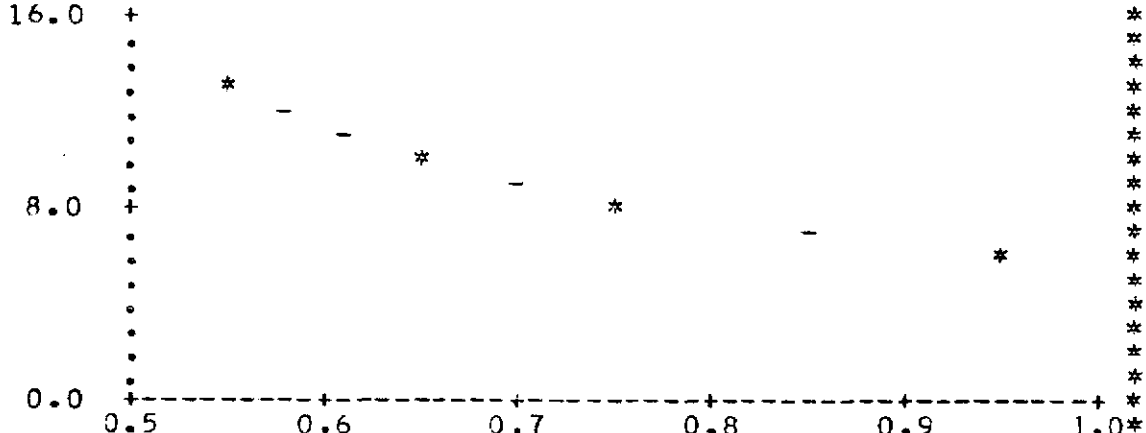
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 13.26 | 7.34 | .5 - .6 |
| BAND 5 | 9.77 | 5.81 | .6 - .7 |
| BAND 6 | 8.30 | 3.87 | .7 - .8 |
| BAND 7 | 5.63 | 1.78 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.988 | 0.978 | 0.972 |
| BAND 5 | 0.988 | 1.000 | 0.988 | 0.975 |
| BAND 6 | 0.978 | 0.988 | 1.000 | 0.988 |
| BAND 7 | 0.972 | 0.975 | 0.988 | 1.000 |

BAND RATIO PARAMETER -0.269
TRANSFORMED PARAMETER 0.480



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1218-18094
DATE ACQUIRED: 26FEB73

CELLS 2387 TO 2406
LINES 1855 TO 1870
TOTAL POINTS 320

***CORRECTED FOR SUN ELEVATION 28 DEGREES***

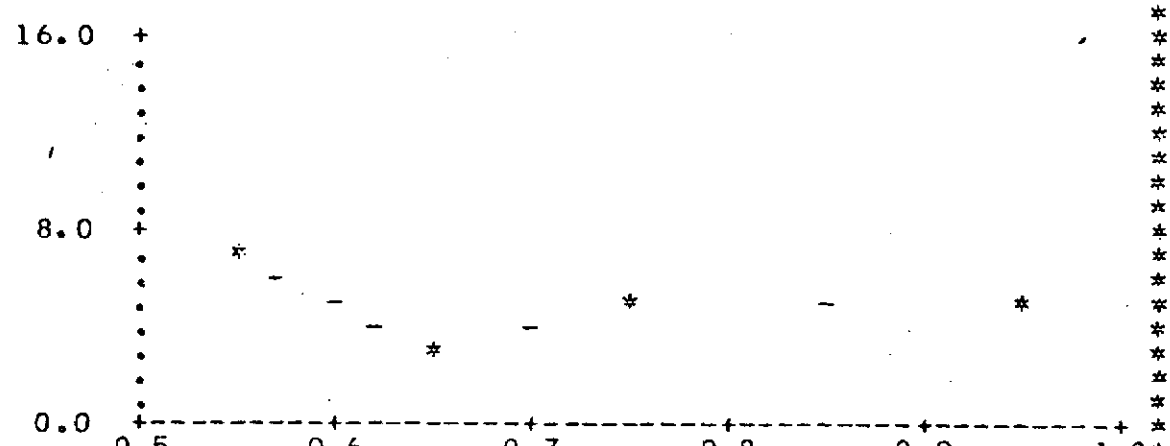
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.85 | 0.97 | .5 - .6 |
| BAND 5 | 3.42 | 0.91 | .6 - .7 |
| BAND 6 | 5.38 | 0.84 | .7 - .8 |
| BAND 7 | 4.95 | 0.74 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.928 | 0.705 | 0.423 |
| BAND 5 | 0.928 | 1.000 | 0.734 | 0.470 |
| BAND 6 | 0.705 | 0.734 | 1.000 | 0.808 |
| BAND 7 | 0.423 | 0.470 | 0.808 | 1.000 |

BAND RATIO PARAMETER 0.183
TRANSFORMED PARAMETER 0.826



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 13MAY74

## ERTS-1

## SITE PROCESSING REPORT

| | | | |
|---|---|---|---|
| SITE DESIGNATOR: | CV 9 A | CELLS | 2339 TO 2344 |
| IMAGE IDENTIFIER: | 1308-18093 | LINES | 2094 TO 2099 |
| DATE ACQUIRED: | 27MAY73 | TOTAL POINTS | 36 |

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

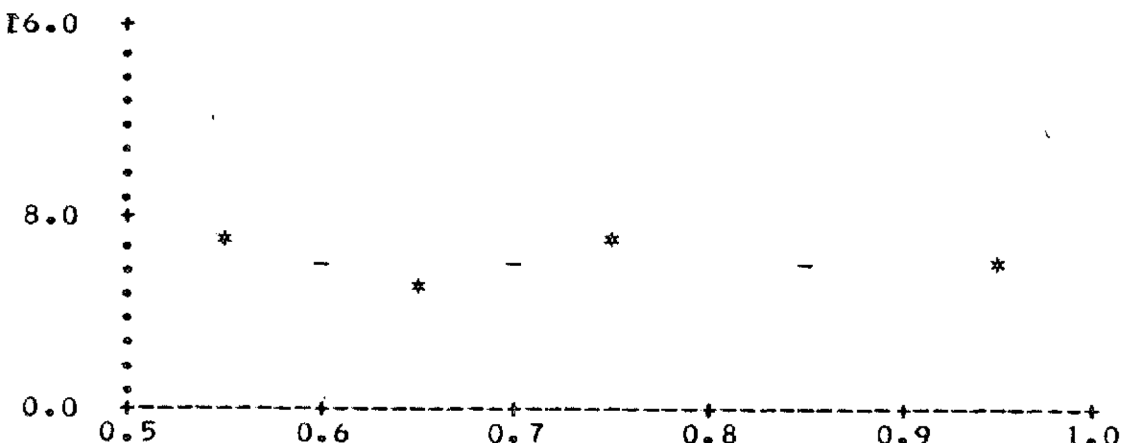
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.10 | 1.32 | .5 - .6 |
| BAND 5 | 5.18 | 2.04 | .6 - .7 |
| BAND 6 | 7.26 | 0.67 | .7 - .8 |
| BAND 7 | 6.13 | 2.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.981 | 0.091 | -0.344 |
| BAND 5 | 0.981 | 1.000 | 0.032 | -0.356 |
| BAND 6 | 0.091 | 0.032 | 1.000 | 0.336 |
| BAND 7 | -0.344 | -0.356 | 0.336 | 1.000 |

BAND RATIO PARAMETER 0.083
TRANSFORMED PARAMETER 0.764




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1308-18093
DATE ACQUIRED: 27MAY73

CELLS 2513 TO 2518
LINES 2008 TO 2016
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

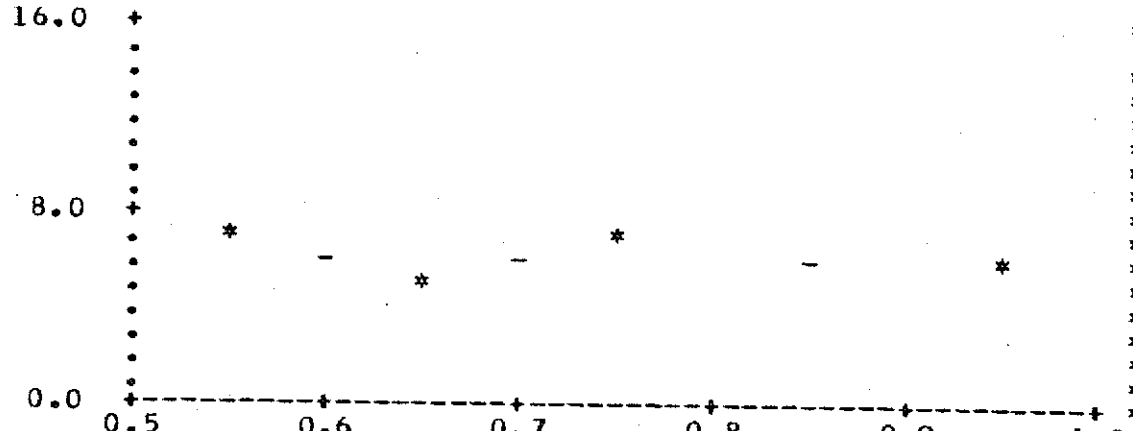
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.11 | 0.47 | .5 - .6 |
| BAND 5 | 4.78 | 0.43 | .6 - .7 |
| BAND 6 | 7.40 | 0.62 | .7 - .8 |
| BAND 7 | 5.77 | 3.07 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.722 | 0.430 | 0.067 |
| BAND 5 | 0.722 | 1.000 | 0.430 | 0.125 |
| BAND 6 | 0.430 | 0.430 | 1.000 | 0.045 |
| BAND 7 | 0.067 | 0.125 | 0.045 | 1.000 |

BAND RATIO PARAMETER 0.094
TRANSFORMED PARAMETER 0.771



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2
IMAGE IDENTIFIER: 1308-18093
DATE ACQUIRED: 27MAY73

CELLS 2515 TO 2518
LINES 2016 TO 2024
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

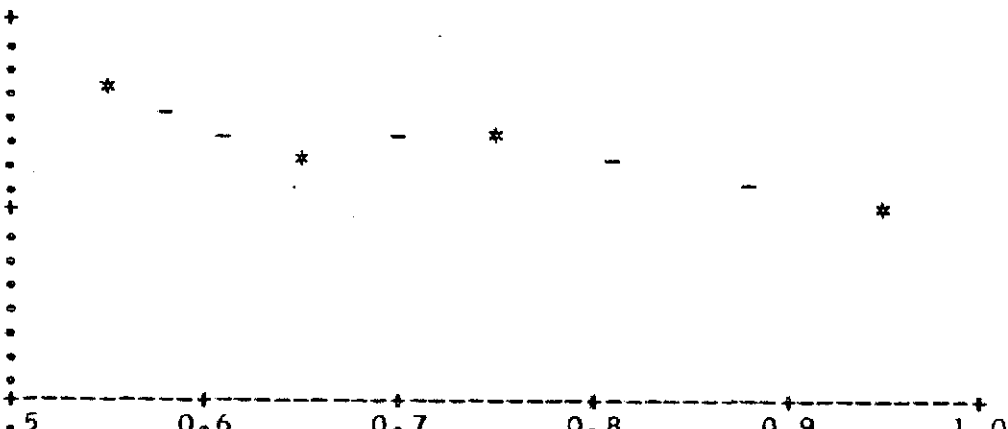
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.72 | 5.35 | .5 - .6 |
| BAND 5 | 10.10 | 4.10 | .6 - .7 |
| BAND 6 | 11.22 | 2.62 | .7 - .8 |
| BAND 7 | 7.57 | 5.03 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.883 | 0.904 | 0.506 |
| BAND 5 | 0.883 | 1.000 | 0.986 | 0.583 |
| BAND 6 | 0.904 | 0.986 | 1.000 | 0.568 |
| BAND 7 | 0.506 | 0.583 | 0.568 | 1.000 |

BAND RATIO PARAMETER -0.143
TRANSFORMED PARAMETER 0.597




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1308-18093
DATE ACQUIRED: 27MAY73

CELLS 2519 TO 2522
LINES 2024 TO 2033
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

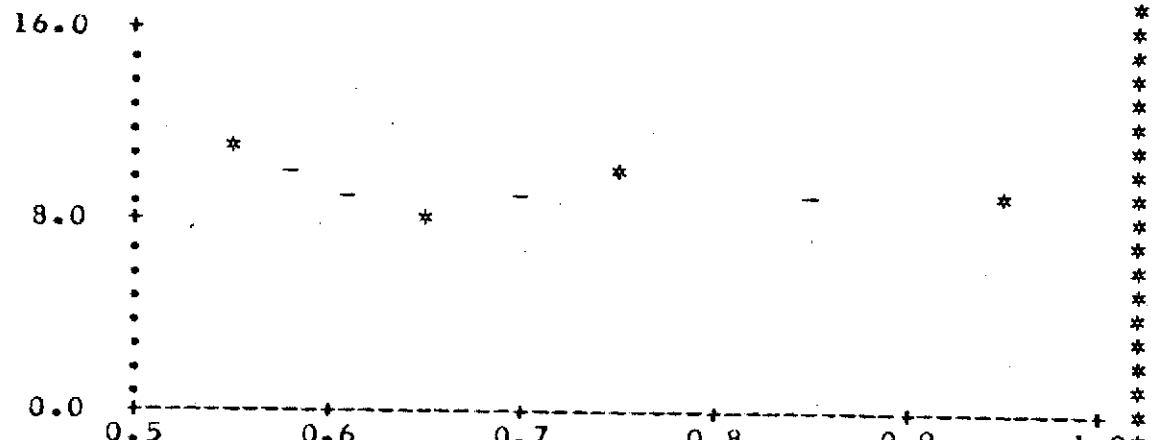
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.10 | 6.69 | .5 - .6 |
| BAND 5 | 8.15 | 5.65 | .6 - .7 |
| BAND 6 | 9.96 | 3.85 | .7 - .8 |
| BAND 7 | 9.33 | 2.68 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.998 | 0.985 | 0.937 |
| BAND 5 | 0.998 | 1.000 | 0.982 | 0.929 |
| BAND 6 | 0.985 | 0.982 | 1.000 | 0.977 |
| BAND 7 | 0.937 | 0.929 | 0.977 | 1.000 |

BAND RATIO PARAMETER 0.068
TRANSFORMED PARAMETER 0.754




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1308-18093
DATE ACQUIRED: 27MAY73

CELLS 2523 TO 2526
LINES 2055 TO 2063
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

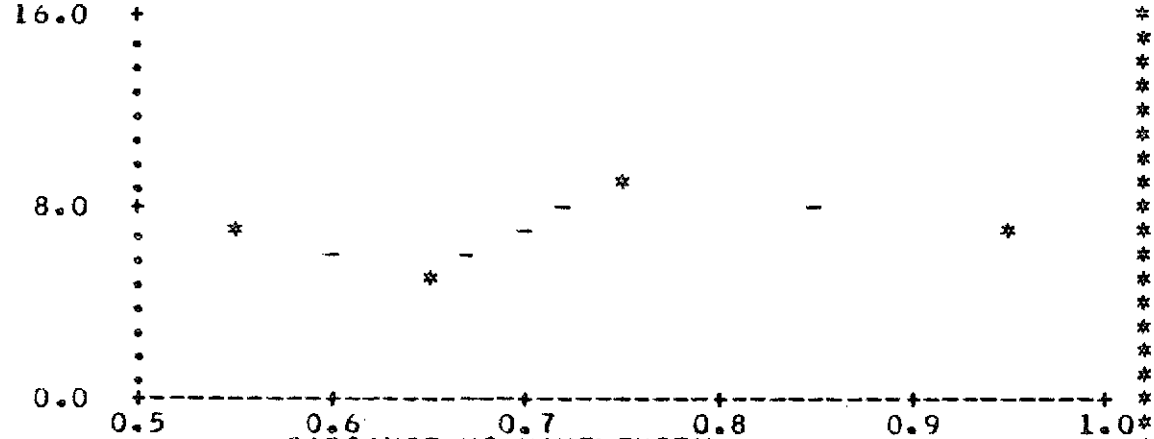
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.00 | 0.32 | .5 - .6 |
| BAND 5 | 4.60 | 0.34 | .6 - .7 |
| BAND 6 | 8.81 | 0.49 | .7 - .8 |
| BAND 7 | 7.35 | 3.18 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.673 | -0.053 | 0.075 |
| BAND 5 | 0.673 | 1.000 | -0.274 | -0.043 |
| BAND 6 | -0.053 | -0.274 | 1.000 | 0.492 |
| BAND 7 | 0.075 | -0.043 | 0.492 | 1.000 |

BAND RATIO PARAMETER 0.230
TRANSFORMED PARAMETER 0.855



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1308-18093
DATE ACQUIRED: 27MAY73

CELLS 2523 TO 2544
LINES 2011 TO 2025
TOTAL POINTS 330

***CORRECTED FOR SUN ELEVATION 57 DEGREES***

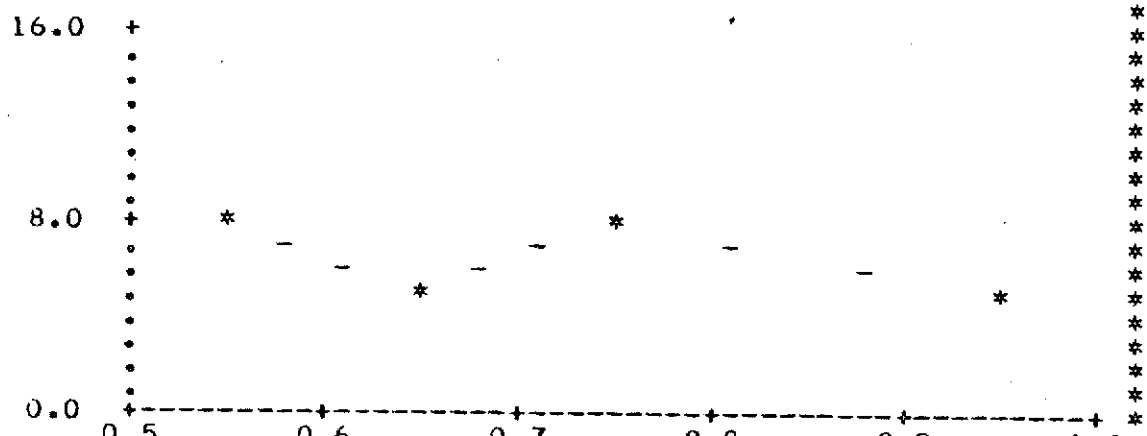
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.32 | 6.92 | .5 - .6 |
| BAND 5 | 5.22 | 5.92 | .6 - .7 |
| BAND 6 | 7.53 | 3.99 | .7 - .8 |
| BAND 7 | 4.97 | 3.86 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.956 | 0.956 | 0.434 |
| BAND 5 | 0.956 | 1.000 | 0.992 | 0.492 |
| BAND 6 | 0.956 | 0.992 | 1.000 | 0.469 |
| BAND 7 | 0.434 | 0.492 | 0.469 | 1.000 |

BAND RATIO PARAMETER -0.025
TRANSFORMED PARAMETER 0.689




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 02JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1361-18031
DATE ACQUIRED: 19JUL73

CELLS 481 TO 484
LINES 2250 TO 2255
TOTAL POINTS 24

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

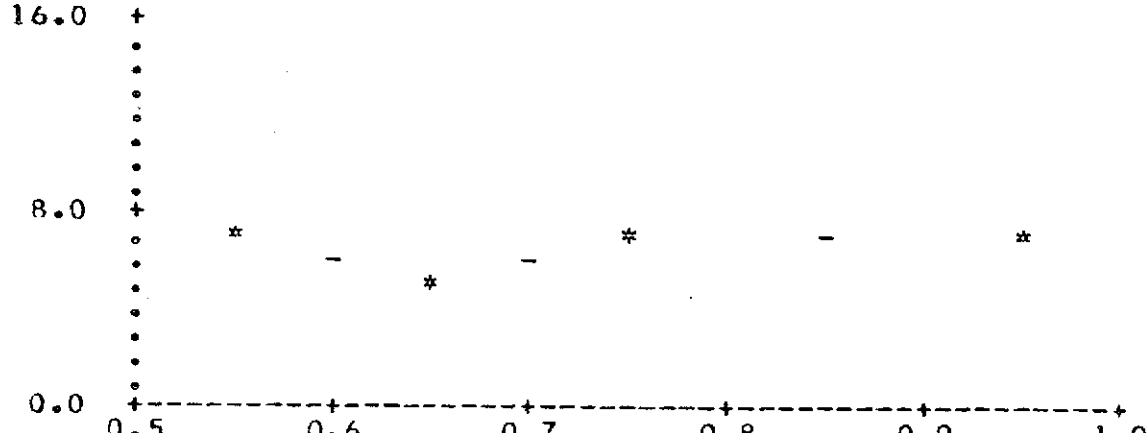
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.05 | 0.78 | .5 - .6 |
| BAND 5 | 4.89 | 1.13 | .6 - .7 |
| BAND 6 | 7.15 | 1.10 | .7 - .8 |
| BAND 7 | 6.86 | 1.19 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.916 | 0.512 | 0.356 |
| BAND 5 | 0.916 | 1.000 | 0.457 | 0.258 |
| BAND 6 | 0.512 | 0.457 | 1.000 | 0.935 |
| BAND 7 | 0.356 | 0.258 | 0.935 | 1.000 |

BAND RATIO PARAMETER 0.167
TRANSFORMED PARAMETER 0.817



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07MAR74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1361-18031
DATE ACQUIRED: 19JUL73

CELLS 651 TO 656
LINES 2160 TO 2167
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

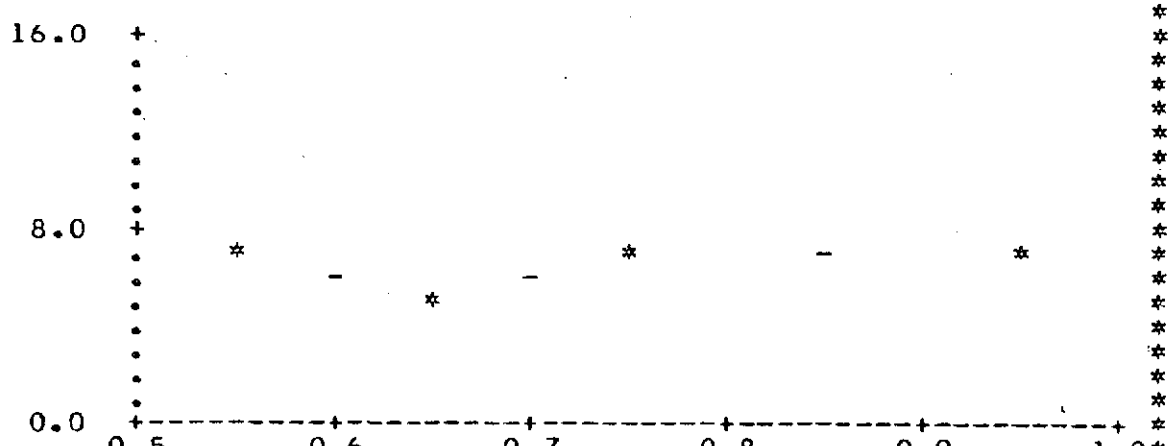
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.05 | 0.40 | .5 - .6 |
| BAND 5 | 5.14 | 0.57 | .6 - .7 |
| BAND 6 | 7.02 | 0.42 | .7 - .8 |
| BAND 7 | 6.84 | 0.55 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.733 | 0.144 | -0.229 |
| BAND 5 | 0.733 | 1.000 | 0.141 | -0.278 |
| BAND 6 | 0.144 | 0.141 | 1.000 | 0.727 |
| BAND 7 | -0.229 | -0.278 | 0.727 | 1.000 |

BAND RATIO PARAMETER 0.142
TRANSFORMED PARAMETER 0.801



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07MAR74



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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2
IMAGE IDENTIFIER: 1361-18031
DATE ACQUIRED: 19JUL73

CELLS 653 TO 660
LINES 2167 TO 2175
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

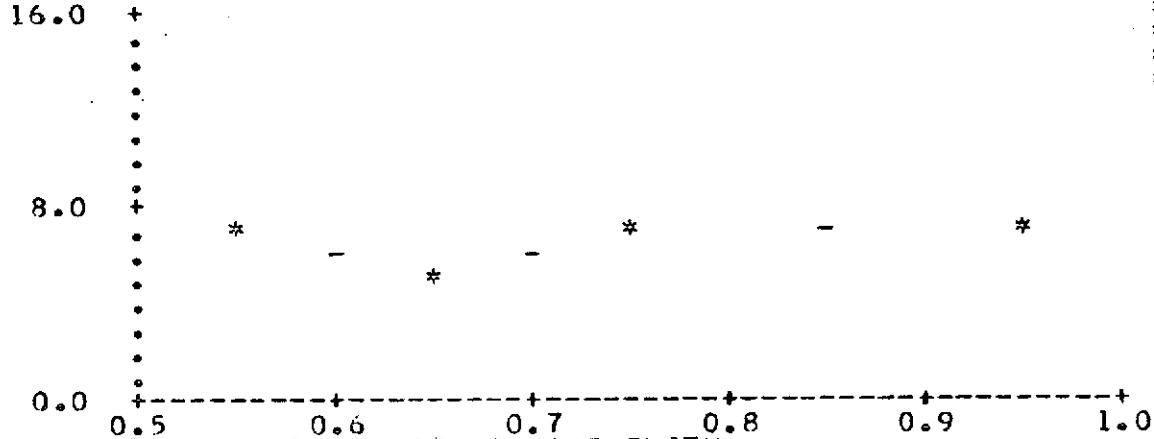
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.05 | 0.53 | .5 - .6 |
| BAND 5 | 5.04 | 0.74 | .6 - .7 |
| BAND 6 | 6.92 | 0.62 | .7 - .8 |
| BAND 7 | 6.60 | 0.67 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.851 | 0.612 | 0.496 |
| BAND 5 | 0.851 | 1.000 | 0.685 | 0.535 |
| BAND 6 | 0.612 | 0.685 | 1.000 | 0.887 |
| BAND 7 | 0.496 | 0.535 | 0.887 | 1.000 |

BAND RATIO PARAMETER 0.134
TRANSFORMED PARAMETER 0.796



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07MAR74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1361-18031
DATE ACQUIRED: 19JUL73

CELLS 657 TO 662
LINES 2175 TO 2183
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

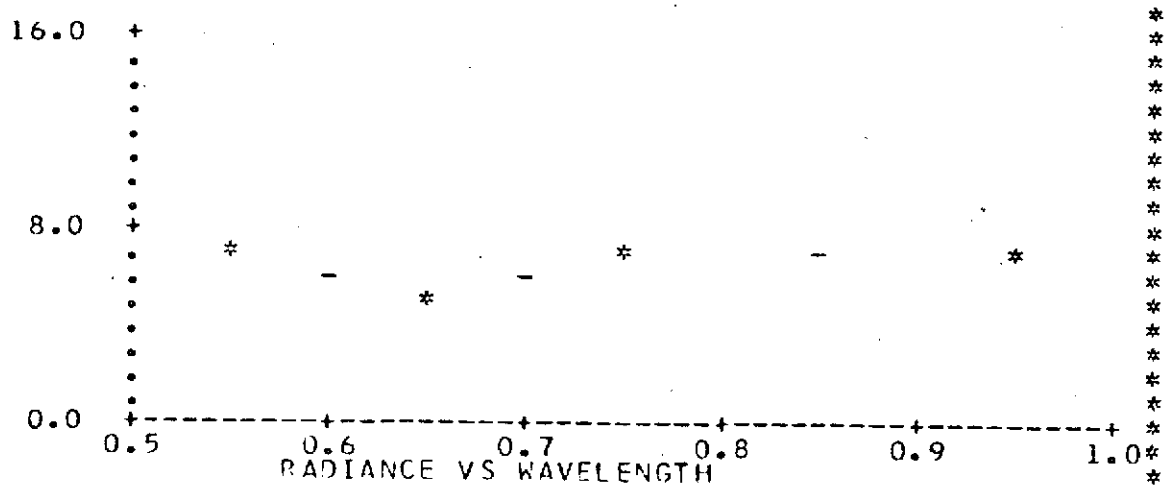
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.12 | 0.50 | .5 - .6 |
| BAND 5 | 5.04 | 0.61 | .6 - .7 |
| BAND 6 | 7.12 | 0.65 | .7 - .8 |
| BAND 7 | 6.80 | 0.78 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.857 | 0.425 | 0.290 |
| BAND 5 | 0.857 | 1.000 | 0.471 | 0.312 |
| BAND 6 | 0.425 | 0.471 | 1.000 | 0.889 |
| BAND 7 | 0.290 | 0.312 | 0.889 | 1.000 |

BAND RATIO PARAMETER 0.149
TRANSFORMED PARAMETER 0.805



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07MAR74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1361-18031
DATE ACQUIRED: 19JUL73

CELLS 661 TO 666
LINES 2207 TO 2215
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

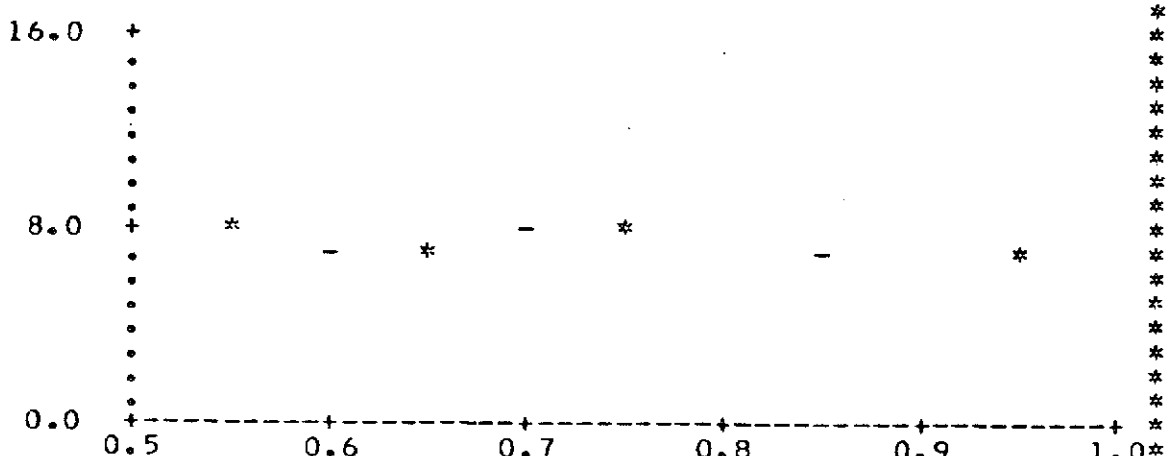
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.26 | 0.34 | .5 - .6 |
| BAND 5 | 6.93 | 0.46 | .6 - .7 |
| BAND 6 | 7.75 | 0.45 | .7 - .8 |
| BAND 7 | 7.10 | 0.30 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.679 | 0.657 | 0.573 |
| BAND 5 | 0.679 | 1.000 | 0.753 | 0.557 |
| BAND 6 | 0.657 | 0.753 | 1.000 | 0.555 |
| BAND 7 | 0.573 | 0.557 | 0.555 | 1.000 |

BAND RATIO PARAMETER 0.012
TRANSFORMED PARAMETER 0.716




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07MAR74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1361-13031
DATE ACQUIRED: 19JUL73

CELLS 663 TO 684
LINES 2162 TO 2176
TOTAL POINTS 330

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

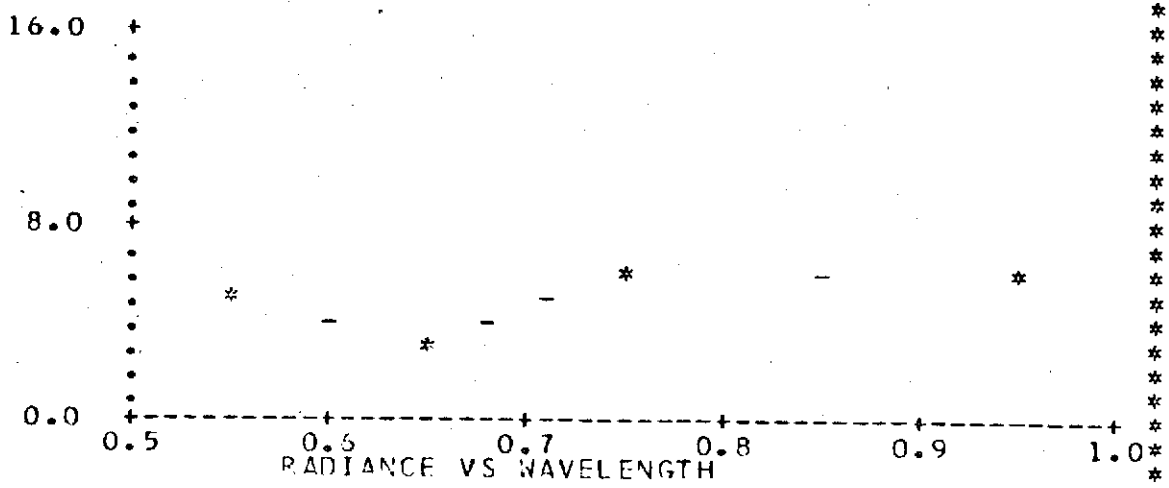
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 5.42 | 0.25 | .5 - .6 |
| BAND 5 | 2.68 | 0.19 | .6 - .7 |
| BAND 6 | 5.91 | 0.48 | .7 - .8 |
| BAND 7 | 5.88 | 0.54 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.412 | 0.249 | 0.275 |
| BAND 5 | 0.412 | 1.000 | 0.126 | 0.134 |
| BAND 6 | 0.249 | 0.126 | 1.000 | 0.815 |
| BAND 7 | 0.275 | 0.134 | 0.815 | 1.000 |

BAND RATIO PARAMETER 0.374
TRANSFORMED PARAMETER 0.935



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07MAR74



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ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1415-18080
DATE ACQUIRED: 12SEP73

CELLS 2253 TO 2258
LINES 1949 TO 1954
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

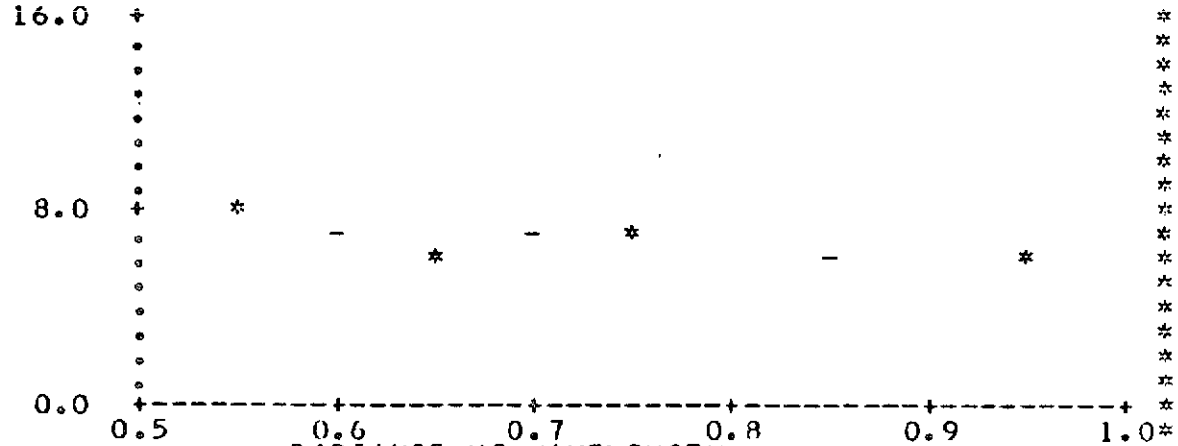
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.80 | 1.07 | .5 - .6 |
| BAND 5 | 6.45 | 1.47 | .6 - .7 |
| BAND 6 | 6.69 | 1.06 | .7 - .8 |
| BAND 7 | 5.99 | 1.12 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.916 | 0.806 | 0.648 |
| BAND 5 | 0.916 | 1.000 | 0.793 | 0.645 |
| BAND 6 | 0.806 | 0.793 | 1.000 | 0.933 |
| BAND 7 | 0.648 | 0.645 | 0.933 | 1.000 |

BAND RATIO PARAMETER -0.037
TRANSFORMED PARAMETER 0.680



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1416-18080
DATE ACQUIRED: 12SEP73

CELLS 2421 TO 2426
LINES 1852 TO 1859
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

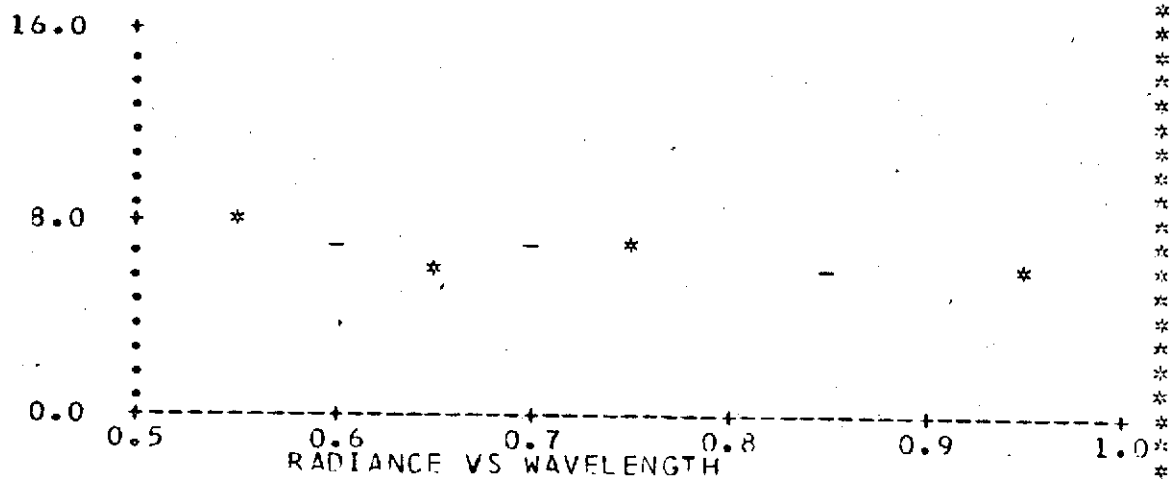
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.72 | 0.59 | .5 - .6 |
| BAND 5 | 6.50 | 0.76 | .6 - .7 |
| BAND 6 | 6.61 | 0.65 | .7 - .8 |
| BAND 7 | 6.22 | 0.73 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.802 | 0.700 | 0.591 |
| BAND 5 | 0.802 | 1.000 | 0.843 | 0.770 |
| BAND 6 | 0.700 | 0.843 | 1.000 | 0.872 |
| BAND 7 | 0.591 | 0.770 | 0.872 | 1.000 |

BAND RATIO PARAMETER -0.022
TRANSFORMED PARAMETER 0.692



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2
IMAGE IDENTIFIER: 1416-18080
DATE ACQUIRED: 12SEP73

CELLS 2423 TO 2428
LINES 1859 TO 1867
TOTAL POINTS 54

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

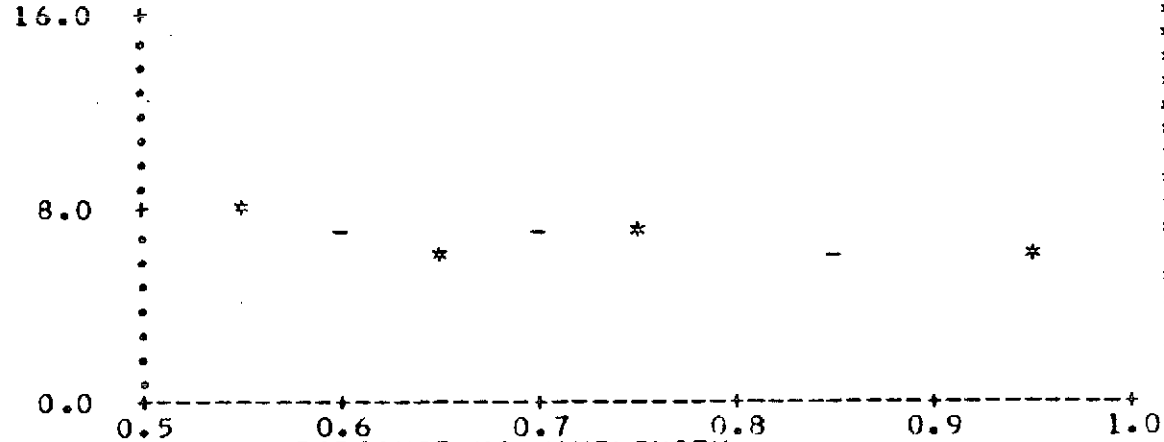
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.57 | 1.21 | .5 - .6 |
| BAND 5 | 6.29 | 1.70 | .6 - .7 |
| BAND 6 | 6.55 | 1.35 | .7 - .8 |
| BAND 7 | 6.08 | 1.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.953 | 0.907 | 0.865 |
| BAND 5 | 0.953 | 1.000 | 0.958 | 0.921 |
| BAND 6 | 0.907 | 0.958 | 1.000 | 0.961 |
| BAND 7 | 0.865 | 0.921 | 0.961 | 1.000 |

BAND RATIO PARAMETER -0.017
TRANSFORMED PARAMETER 0.695



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1416-18080
DATE ACQUIRED: 12SEP73

CELLS 2425 TO 2430
LINES 1867 TO 1873
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

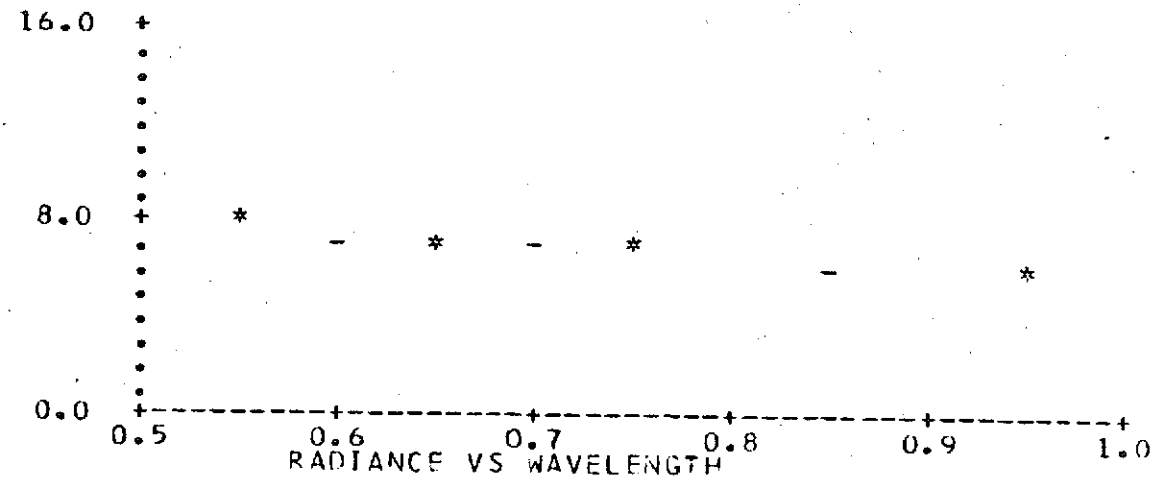
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.80 | 0.80 | .5 - .6 |
| BAND 5 | 6.69 | 1.11 | .6 - .7 |
| BAND 6 | 6.84 | 0.91 | .7 - .8 |
| BAND 7 | 6.32 | 0.97 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.900 | 0.908 | 0.838 |
| BAND 5 | 0.900 | 1.000 | 0.940 | 0.887 |
| BAND 6 | 0.908 | 0.940 | 1.000 | 0.930 |
| BAND 7 | 0.838 | 0.887 | 0.930 | 1.000 |

BAND RATIO PARAMETER -0.028
TRANSFORMED PARAMETER 0.687



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1416-18080
DATE ACQUIRED: 12SEP73

CELLS 2433 TO 2440
LINES 1899 TO 1907
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

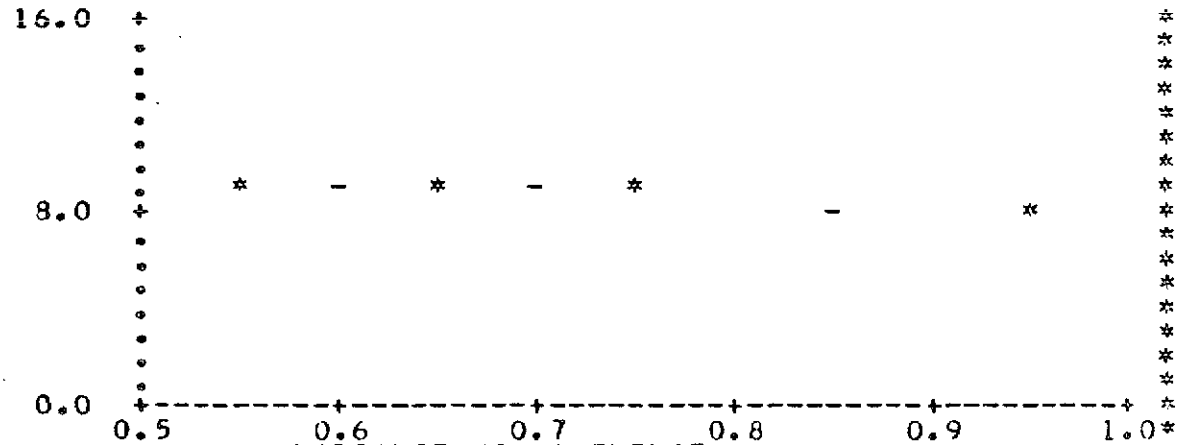
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.18 | 2.74 | .5 - .6 |
| BAND 5 | 8.56 | 4.04 | .6 - .7 |
| BAND 6 | 8.68 | 2.77 | .7 - .8 |
| BAND 7 | 7.57 | 2.20 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.991 | 0.984 | 0.977 |
| BAND 5 | 0.991 | 1.000 | 0.986 | 0.983 |
| BAND 6 | 0.984 | 0.986 | 1.000 | 0.988 |
| BAND 7 | 0.977 | 0.983 | 0.988 | 1.000 |

BAND RATIO PARAMETER -0.061
TRANSFORMED PARAMETER 0.662



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1416-18080
DATE ACQUIRED: 12SEP73

CELLS 2435 TO 2454
LINES 1855 TO 1868
TOTAL POINTS 280

***CORRECTED FOR SUN ELEVATION 42 DEGREES***

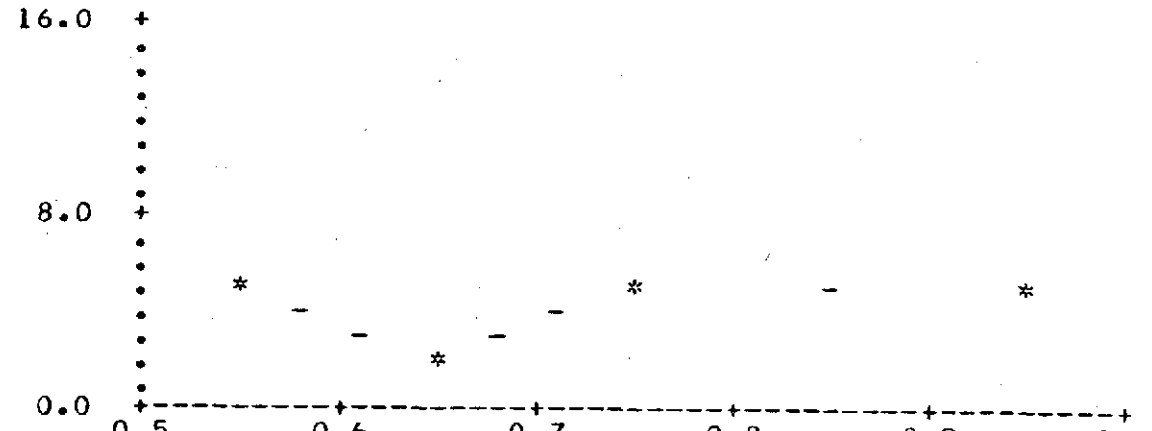
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 4.91 | 0.42 | .5 - .6 |
| BAND 5 | 2.44 | 0.59 | .6 - .7 |
| BAND 6 | 4.77 | 0.46 | .7 - .8 |
| BAND 7 | 4.75 | 0.55 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.846 | 0.506 | 0.503 |
| BAND 5 | 0.846 | 1.000 | 0.445 | 0.466 |
| BAND 6 | 0.506 | 0.445 | 1.000 | 0.833 |
| BAND 7 | 0.503 | 0.466 | 0.833 | 1.000 |

BAND RATIO PARAMETER 0.320
TRANSFORMED PARAMETER 0.906



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 23JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 A
IMAGE IDENTIFIER: 1452-18070
DATE ACQUIRED: 18OCT73

CELLS 2053 TO 2058
LINES 2101 TO 2107
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

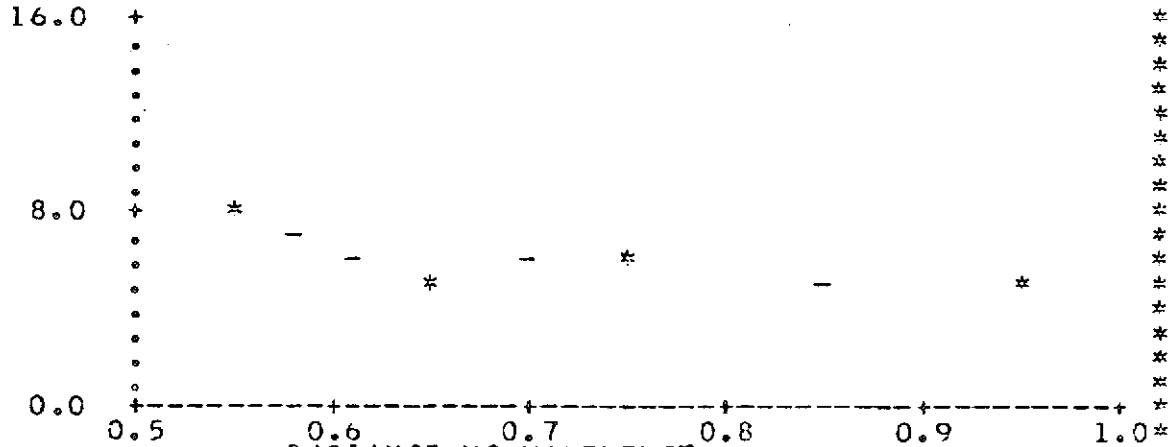
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.96 | 0.88 | .5 - .6 |
| BAND 5 | 5.16 | 0.83 | .6 - .7 |
| BAND 6 | 5.51 | 0.92 | .7 - .8 |
| BAND 7 | 4.83 | 0.99 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.845 | 0.693 | 0.582 |
| BAND 5 | 0.845 | 1.000 | 0.652 | 0.541 |
| BAND 6 | 0.693 | 0.652 | 1.000 | 0.874 |
| BAND 7 | 0.582 | 0.541 | 0.874 | 1.000 |

BAND RATIO PARAMETER -0.033
TRANSFORMED PARAMETER 0.683




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R1
IMAGE IDENTIFIER: 1452-18070
DATE ACQUIRED: 18OCT73

CELLS 2223 TO 2230
LINES 2009 TO 2021
TOTAL POINTS 104

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

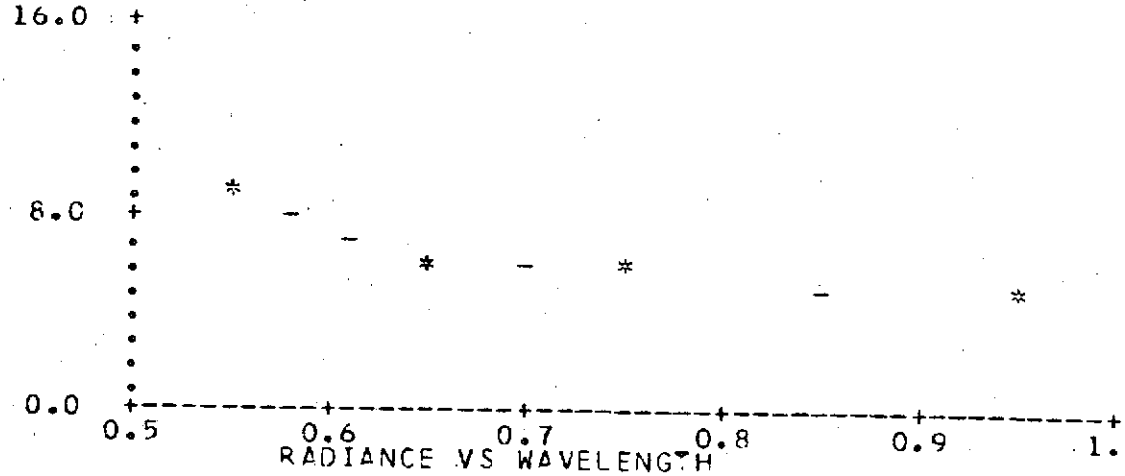
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.53 | 0.70 | .5 - .6 |
| BAND 5 | 6.13 | 0.81 | .6 - .7 |
| BAND 6 | 6.11 | 0.64 | .7 - .8 |
| BAND 7 | 5.30 | 0.58 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.802 | 0.728 | 0.535 |
| BAND 5 | 0.802 | 1.000 | 0.794 | 0.649 |
| BAND 6 | 0.728 | 0.794 | 1.000 | 0.776 |
| BAND 7 | 0.535 | 0.649 | 0.776 | 1.000 |

BAND RATIO PARAMETER -0.073
TRANSFORMED PARAMETER 0.654




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R2 CELLS 2227 TO 2232
IMAGE IDENTIFIER: 1452-18070 LINES 2021 TO 2027
DATE ACQUIRED: 18OCT73 TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

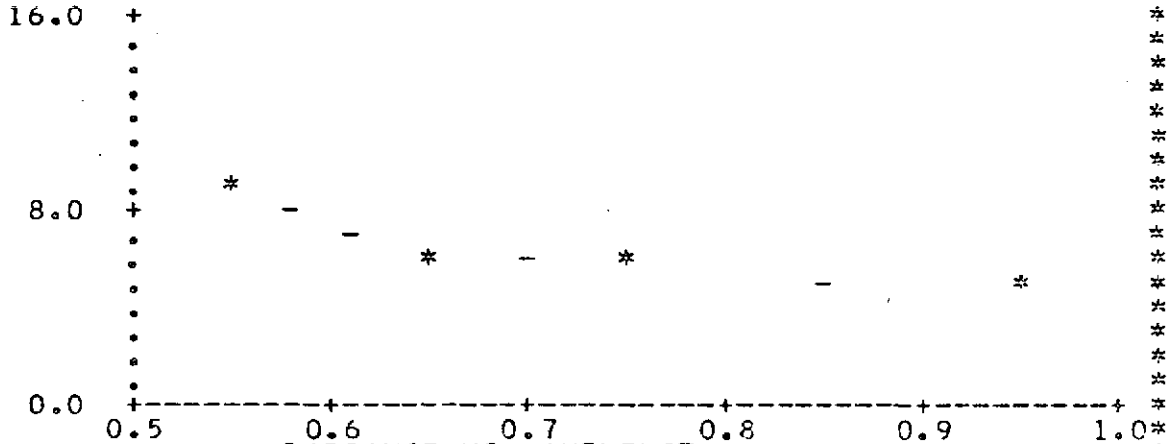
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.73 | 0.72 | .5 - .6 |
| BAND 5 | 6.36 | 0.92 | .6 - .7 |
| BAND 6 | 6.32 | 0.62 | .7 - .8 |
| BAND 7 | 5.38 | 0.70 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.801 | 0.706 | 0.524 |
| BAND 5 | 0.801 | 1.000 | 0.859 | 0.736 |
| BAND 6 | 0.706 | 0.859 | 1.000 | 0.783 |
| BAND 7 | 0.524 | 0.736 | 0.783 | 1.000 |

BAND RATIO PARAMETER -0.083
TRANSFORMED PARAMETER 0.645



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 R3
IMAGE IDENTIFIER: 1452-18070
DATE ACQUIRED: 18OCT73

CELLS 2229 TO 2234
LINES 2027 TO 2033
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

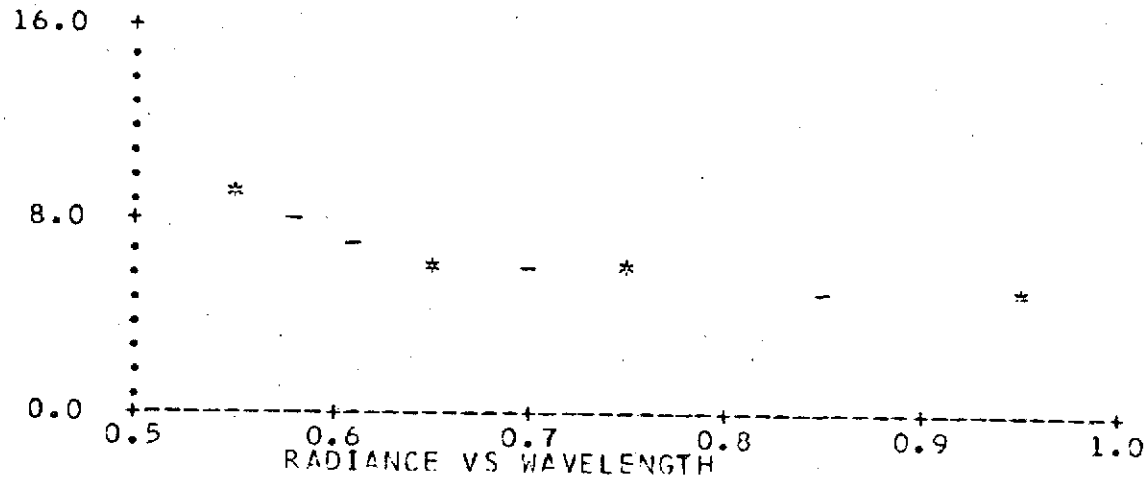
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.56 | 0.87 | .5 - .6 |
| BAND 5 | 6.11 | 1.01 | .6 - .7 |
| BAND 6 | 6.19 | 0.62 | .7 - .8 |
| BAND 7 | 5.26 | 0.60 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.833 | 0.785 | 0.598 |
| BAND 5 | 0.833 | 1.000 | 0.783 | 0.694 |
| BAND 6 | 0.785 | 0.783 | 1.000 | 0.639 |
| BAND 7 | 0.593 | 0.694 | 0.639 | 1.000 |

BAND RATIO PARAMETER -0.075
TRANSFORMED PARAMETER 0.652




PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 W
IMAGE IDENTIFIER: 1452-18070
DATE ACQUIRED: 18OCT73

CELLS 2233 TO 2240
LINES 2055 TO 2064
TOTAL POINTS 80

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

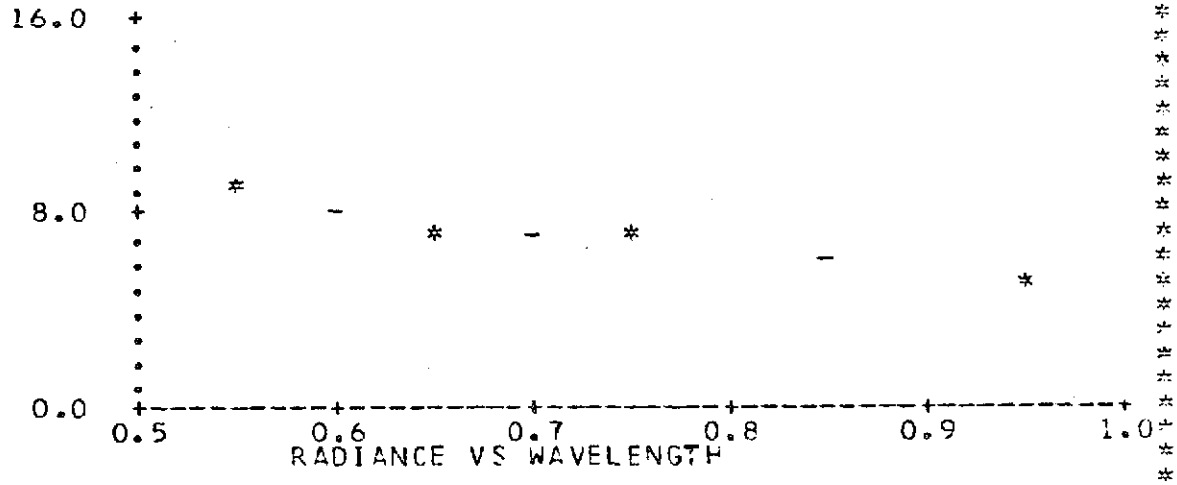
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.46 | 0.80 | .5 - .6 |
| BAND 5 | 7.02 | 0.89 | .6 - .7 |
| BAND 6 | 6.67 | 0.73 | .7 - .8 |
| BAND 7 | 5.50 | 0.73 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.833 | 0.807 | 0.827 |
| BAND 5 | 0.833 | 1.000 | 0.849 | 0.820 |
| BAND 6 | 0.807 | 0.849 | 1.000 | 0.867 |
| BAND 7 | 0.827 | 0.820 | 0.867 | 1.000 |

BAND RATIO PARAMETER -0.122
TRANSFORMED PARAMETER 0.615



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV 9 C
IMAGE IDENTIFIER: 1452-18070
DATE ACQUIRED: 18OCT73

CELLS 2233 TO 2256
LINES 2011 TO 2025
TOTAL POINTS 360

***CORRECTED FOR SUN ELEVATION 29 DEGREES***

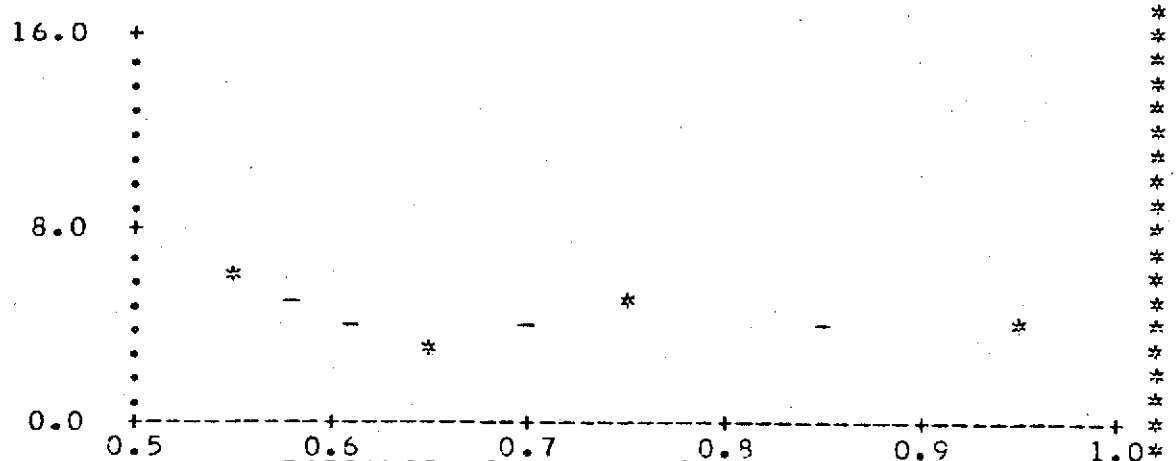
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.37 | 0.41 | .5 - .6 |
| BAND 5 | 3.16 | 0.53 | .6 - .7 |
| BAND 6 | 4.57 | 0.55 | .7 - .8 |
| BAND 7 | 4.12 | 0.54 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.679 | 0.299 | 0.151 |
| BAND 5 | 0.679 | 1.000 | 0.385 | 0.285 |
| BAND 6 | 0.299 | 0.385 | 1.000 | 0.669 |
| BAND 7 | 0.151 | 0.285 | 0.669 | 1.000 |

BAND RATIO PARAMETER 0.132
TRANSFORMED PARAMETER 0.795




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14MAY74



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OF POOR QUALITY

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1040-18204
DATE ACQUIRED: 01SEP72

CELLS 1479 TO 1486
LINES 1072 TO 1076
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

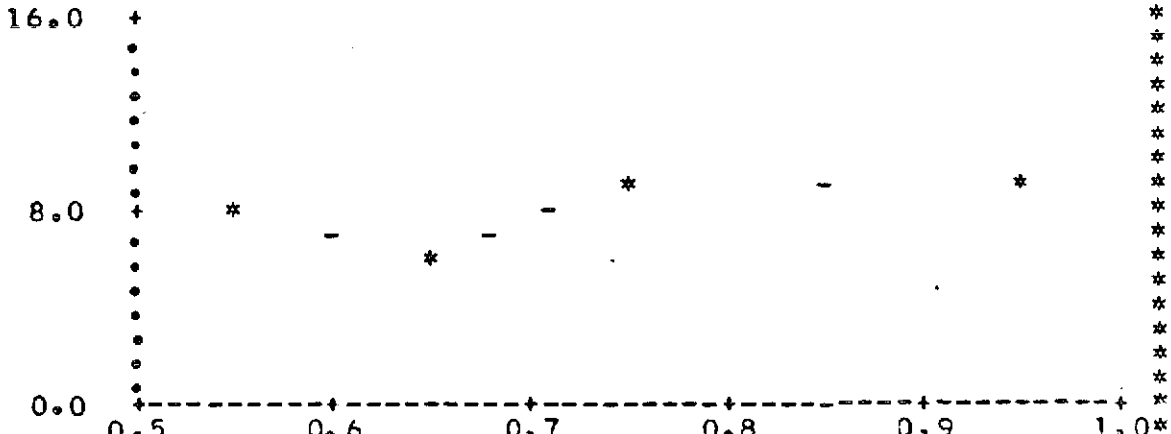
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.26 | 0.67 | .5 - .6 |
| BAND 5 | 5.94 | 0.95 | .6 - .7 |
| BAND 6 | 9.16 | 0.58 | .7 - .8 |
| BAND 7 | 9.09 | 0.84 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.866 | -0.246 | -0.456 |
| BAND 5 | 0.866 | 1.000 | -0.312 | -0.542 |
| BAND 6 | -0.246 | -0.312 | 1.000 | 0.832 |
| BAND 7 | -0.456 | -0.542 | 0.832 | 1.000 |

BAND RATIO PARAMETER 0.209
TRANSFORMED PARAMETER 0.842




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1040-18204
DATE ACQUIRED: 01SEP72

CELLS 1465 TO 1474
LINES 1089 TO 1094
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

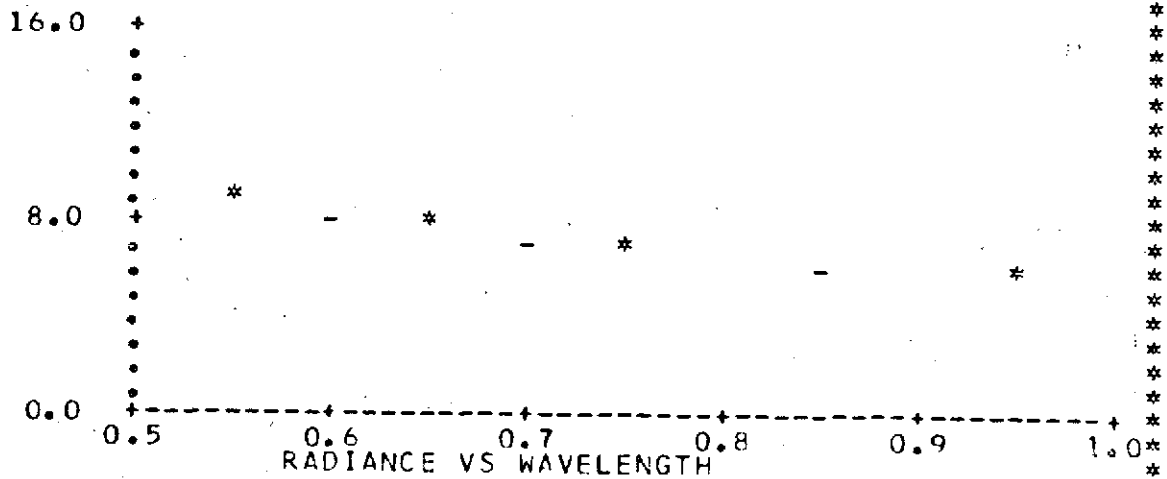
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.26 | 0.73 | .5 - .6 |
| BAND 5 | 8.10 | 0.99 | .6 - .7 |
| BAND 6 | 7.04 | 0.71 | .7 - .8 |
| BAND 7 | 5.80 | 0.59 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.892 | 0.776 | 0.533 |
| BAND 5 | 0.892 | 1.000 | 0.888 | 0.636 |
| BAND 6 | 0.776 | 0.888 | 1.000 | 0.799 |
| BAND 7 | 0.533 | 0.636 | 0.799 | 1.000 |

BAND RATIO PARAMETER -0.166
TRANSFORMED PARAMETER 0.578




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1040-18204
DATE ACQUIRED: 01SEP72

CELLS 1451 TO 1460
LINES 1102 TO 1111
TOTAL POINTS 100

***CORRECTED FOR SUN ELEVATION 46 DEGREES***

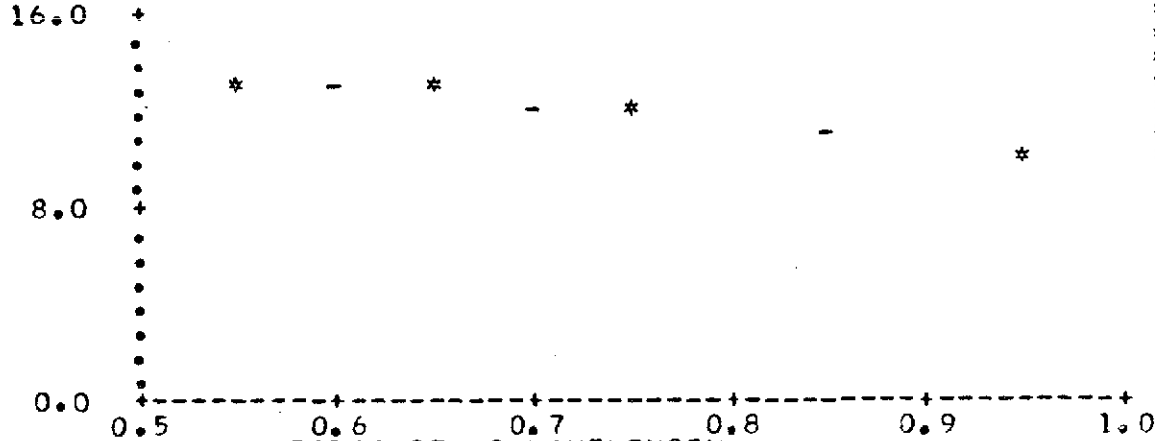
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.67 | 1.04 | .5 - .6 |
| BAND 5 | 13.18 | 1.49 | .6 - .7 |
| BAND 6 | 12.03 | 1.41 | .7 - .8 |
| BAND 7 | 10.46 | 1.26 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.907 | 0.857 | 0.847 |
| BAND 5 | 0.907 | 1.000 | 0.926 | 0.922 |
| BAND 6 | 0.857 | 0.926 | 1.000 | 0.944 |
| BAND 7 | 0.847 | 0.922 | 0.944 | 1.000 |

BAND RATIO PARAMETER -0.115
TRANSFORMED PARAMETER 0.620



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 14JUN73

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1058-18203
DATE ACQUIRED: 19SEP72

CELLS 1375 TO 1382
LINES 1105 TO 1110
TOTAL POINTS 48

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

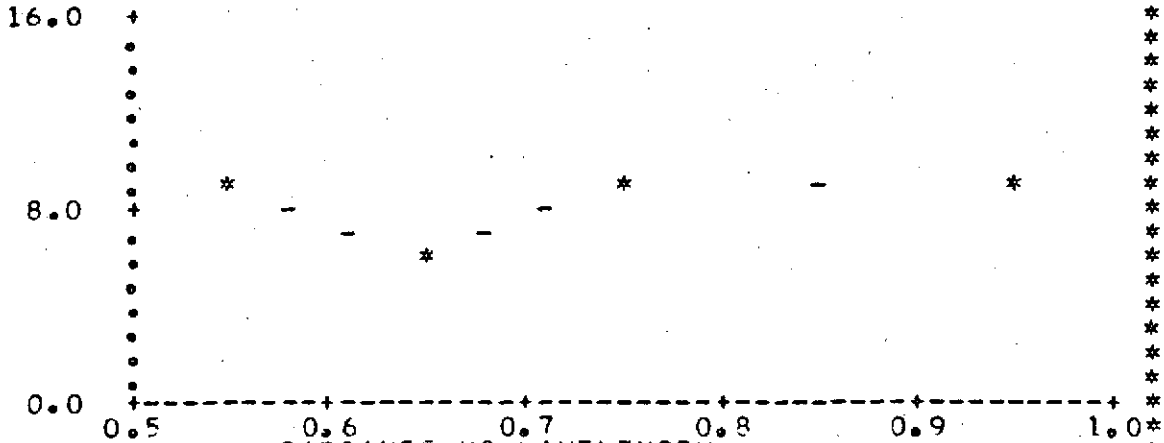
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.80 | 0.74 | .5 - .6 |
| BAND 5 | 6.46 | 1.10 | .6 - .7 |
| BAND 6 | 9.42 | 0.74 | .7 - .8 |
| BAND 7 | 9.12 | 0.93 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.905 | 0.273 | 0.079 |
| BAND 5 | 0.905 | 1.000 | 0.188 | 0.015 |
| BAND 6 | 0.273 | 0.188 | 1.000 | 0.887 |
| BAND 7 | 0.079 | 0.015 | 0.987 | 1.000 |

BAND RATIO PARAMETER 0.170
TRANSFORMED PARAMETER 0.819




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 24JUL73

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1058-18203
DATE ACQUIRED: 19SEP72

CELLS 1361 TO 1366
LINES 1122 TO 1127
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

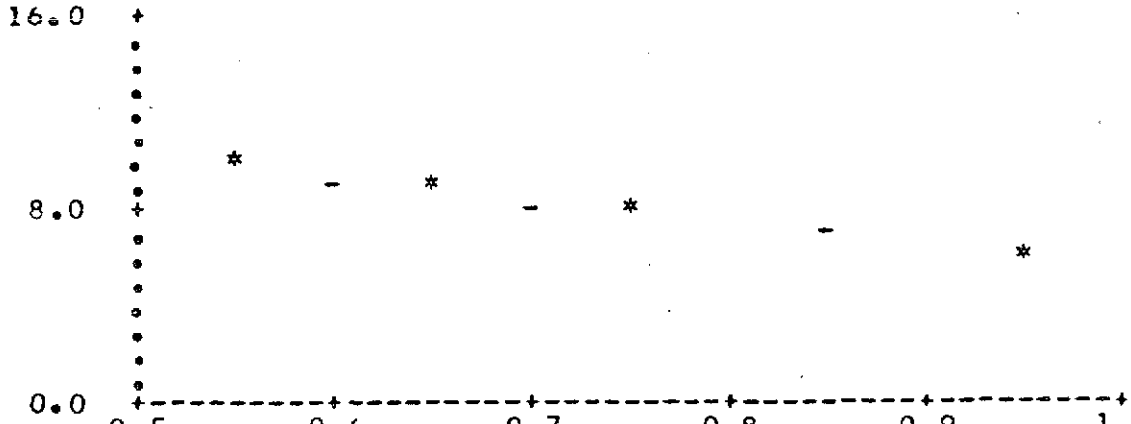
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.77 | 0.83 | .5 - .6 |
| BAND 5 | 8.62 | 1.12 | .6 - .7 |
| BAND 6 | 7.69 | 1.30 | .7 - .8 |
| BAND 7 | 6.45 | 1.03 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.906 | 0.807 | 0.748 |
| BAND 5 | 0.906 | 1.000 | 0.879 | 0.803 |
| BAND 6 | 0.807 | 0.879 | 1.000 | 0.955 |
| BAND 7 | 0.748 | 0.803 | 0.955 | 1.000 |

BAND RATIO PARAMETER -0.144
TRANSFORMED PARAMETER 0.597



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 24JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1058-18203
DATE ACQUIRED: 19SEP72

CELLS 1359 TO 1366
LINES 1142 TO 1148
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 40 DEGREES***

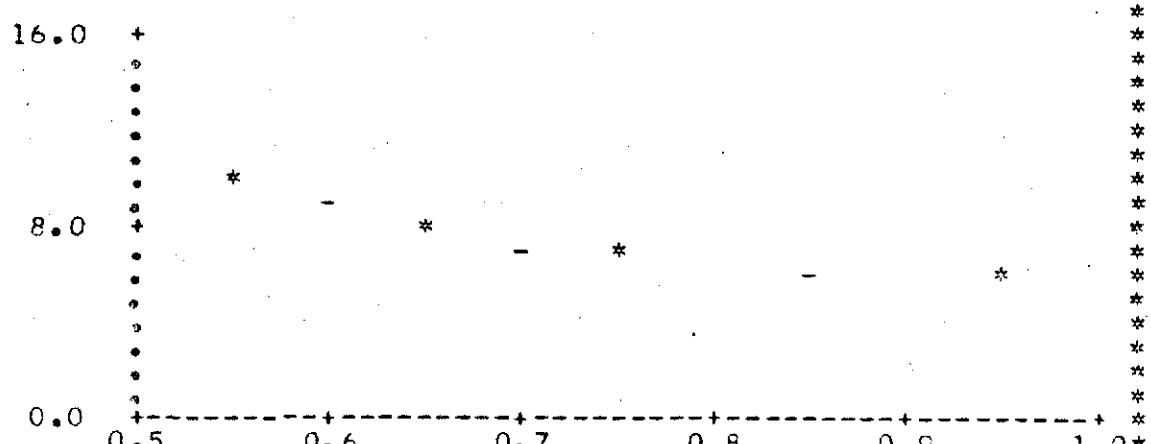
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.77 | 0.33 | .5 - .6 |
| BAND 5 | 8.12 | 0.35 | .6 - .7 |
| BAND 6 | 6.88 | 0.31 | .7 - .8 |
| BAND 7 | 5.81 | 0.22 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.343 | 0.172 | 0.341 |
| BAND 5 | 0.343 | 1.000 | 0.212 | 0.357 |
| BAND 6 | 0.172 | 0.212 | 1.000 | 0.127 |
| BAND 7 | 0.341 | 0.357 | 0.127 | 1.000 |

BAND RATIO PARAMETER -0.166
TRANSFORMED PARAMETER 0.579




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 24JUL73



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OF POOR QUALITY

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1076-18204
DATE ACQUIRED: 07OCT72

CELLS 1353 TO 1360
LINES 1168 TO 1172
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

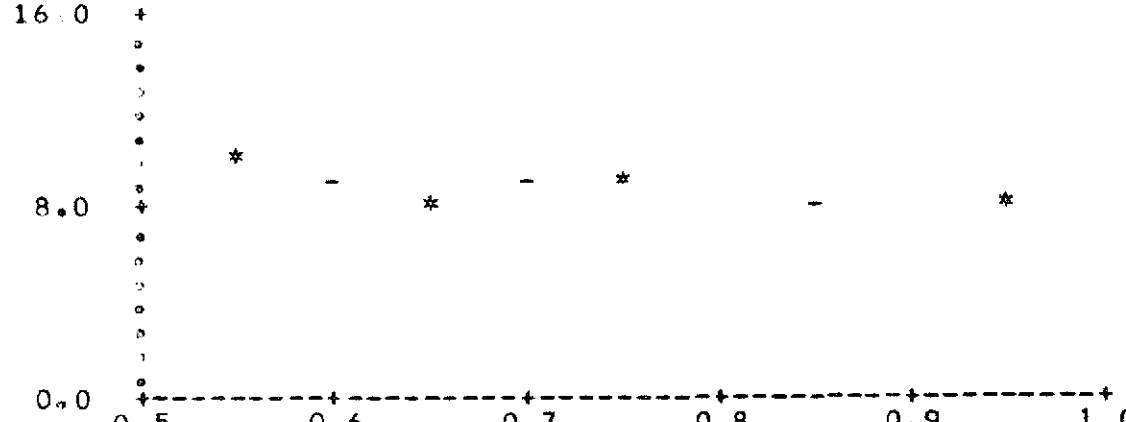
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.94 | 0.61 | .5 - .6 |
| BAND 5 | 7.57 | 0.74 | .6 - .7 |
| BAND 6 | 8.69 | 0.58 | .7 - .8 |
| BAND 7 | 7.94 | 0.41 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.828 | 0.585 | 0.391 |
| BAND 5 | 0.828 | 1.000 | 0.628 | 0.496 |
| BAND 6 | 0.585 | 0.628 | 1.000 | 0.689 |
| BAND 7 | 0.391 | 0.496 | 0.689 | 1.000 |

BAND RATIO PARAMETER 0.024
TRANSFORMED PARAMETER 0.724




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 31JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1076-18204
DATE ACQUIRED: 07OCT72

CELLS 1339 TO 1344
LINES 1184 TO 1189
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

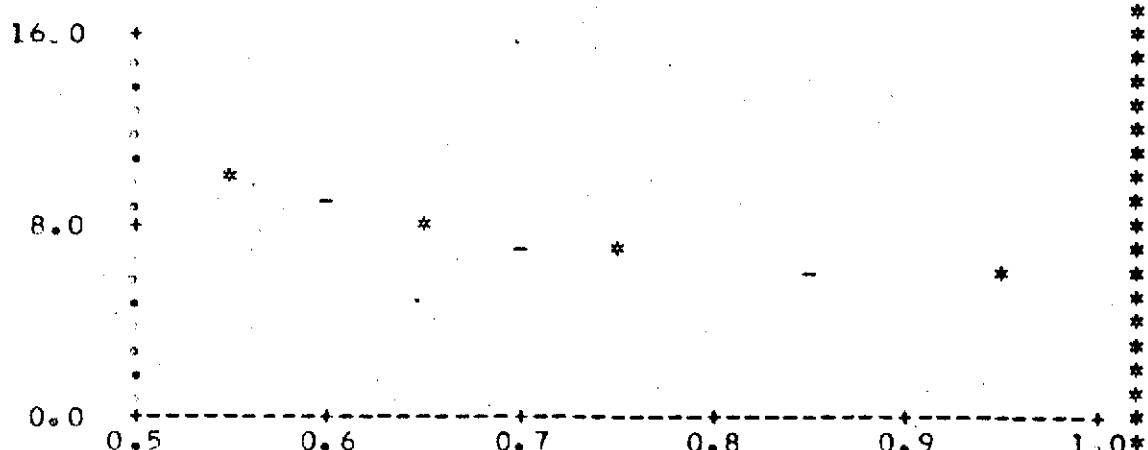
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.20 | 0.90 | .5 - .6 |
| BAND 5 | 8.50 | 1.20 | .6 - .7 |
| BAND 6 | 7.19 | 1.18 | .7 - .8 |
| BAND 7 | 5.78 | 1.16 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.882 | 0.772 | 0.734 |
| BAND 5 | 0.882 | 1.000 | 0.921 | 0.866 |
| BAND 6 | 0.772 | 0.921 | 1.000 | 0.936 |
| BAND 7 | 0.734 | 0.866 | 0.936 | 1.000 |

BAND RATIO PARAMETER -0.190
TRANSFORMED PARAMETER 0.556




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 31JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1076-18204
DATE ACQUIRED: 07OCT72

CELLS 1337 TO 1344
LINES 1204 TO 1210
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 34 DEGREES***

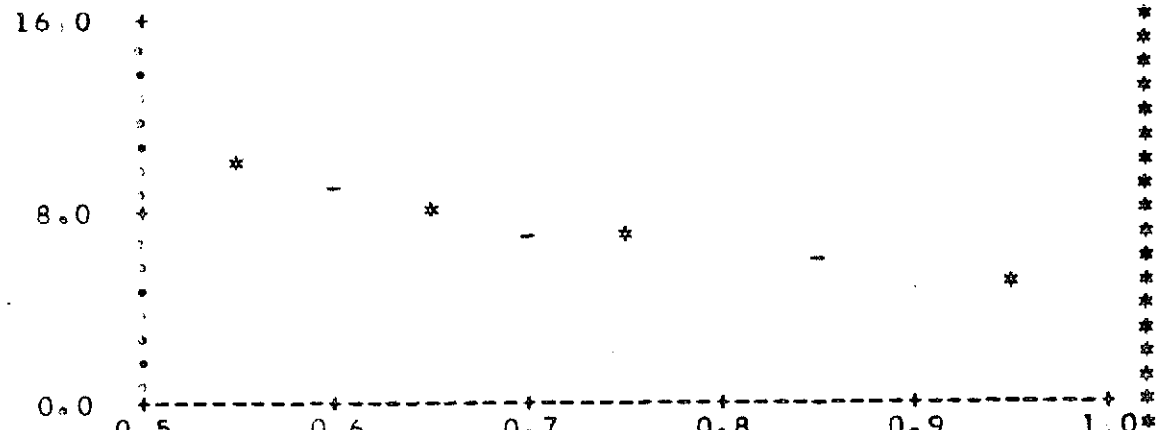
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.01 | 0.33 | .5 - .6 |
| BAND 5 | 7.85 | 0.37 | .6 - .7 |
| BAND 6 | 6.79 | 0.26 | .7 - .8 |
| BAND 7 | 5.49 | 0.23 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.502 | 0.230 | 0.044 |
| BAND 5 | 0.502 | 1.000 | 0.117 | 0.254 |
| BAND 6 | 0.230 | 0.117 | 1.000 | 0.272 |
| BAND 7 | 0.044 | 0.254 | 0.272 | 1.000 |

BAND RATIO PARAMETER -0.177
TRANSFORMED PARAMETER 0.568




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 31JUL73

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1292-18213
DATE ACQUIRED: 11MAY73

CELLS 1761 TO 1768
LINES 1170 TO 1174
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

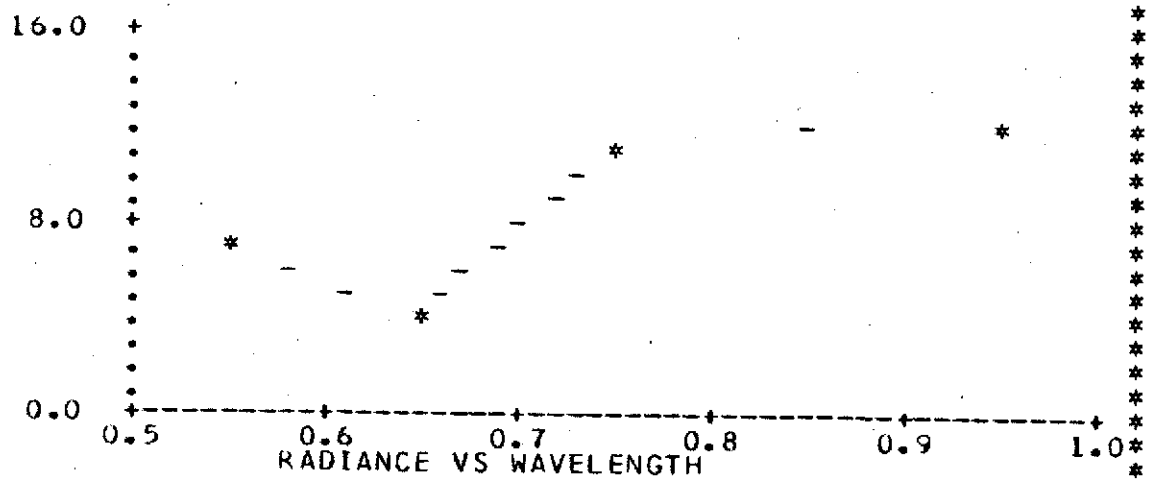
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.63 | 0.76 | .5 - .6 |
| BAND 5 | 3.98 | 1.07 | .6 - .7 |
| BAND 6 | 10.59 | 1.42 | .7 - .8 |
| BAND 7 | 11.82 | 2.09 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.934 | -0.785 | -0.839 |
| BAND 5 | 0.934 | 1.000 | -0.846 | -0.885 |
| BAND 6 | -0.785 | -0.846 | 1.000 | 0.978 |
| BAND 7 | -0.839 | -0.885 | 0.978 | 1.000 |

BAND RATIO PARAMETER 0.496
TRANSFORMED PARAMETER 0.998



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 04JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1292-18213
DATE ACQUIRED: 11MAY73

CELLS 1747 TO 1750
LINES 1186 TO 1192
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

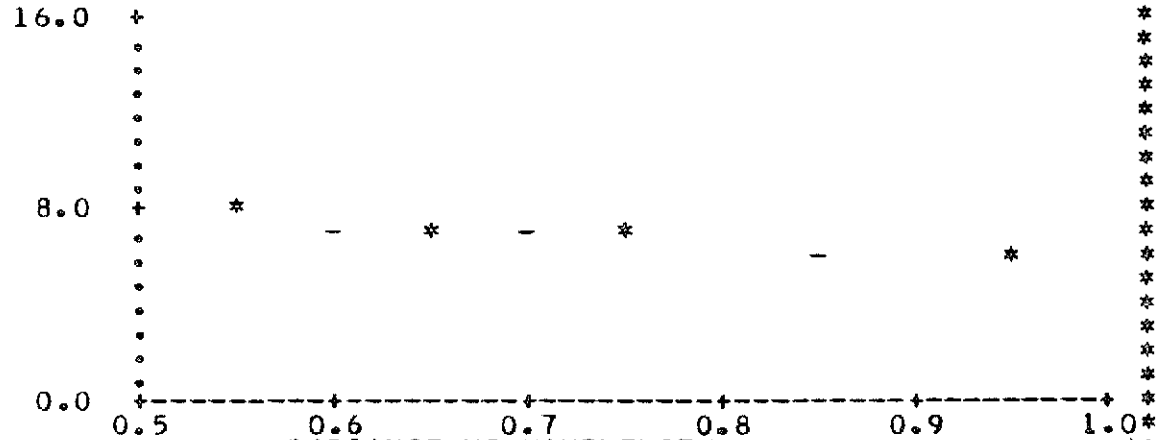
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.27 | 0.48 | .5 - .6 |
| BAND 5 | 6.76 | 0.60 | .6 - .7 |
| BAND 6 | 7.11 | 0.57 | .7 - .8 |
| BAND 7 | 6.32 | 0.72 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.806 | 0.364 | -0.031 |
| BAND 5 | 0.806 | 1.000 | 0.147 | -0.227 |
| BAND 6 | 0.364 | 0.147 | 1.000 | 0.877 |
| BAND 7 | -0.031 | -0.227 | 0.877 | 1.000 |

BAND RATIO PARAMETER -0.033
TRANSFORMED PARAMETER 0.683




RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 04JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1292-18213
DATE ACQUIRED: 11MAY73

CELLS 1743 TO 1752
LINES 1207 TO 1212
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 55 DEGREES***

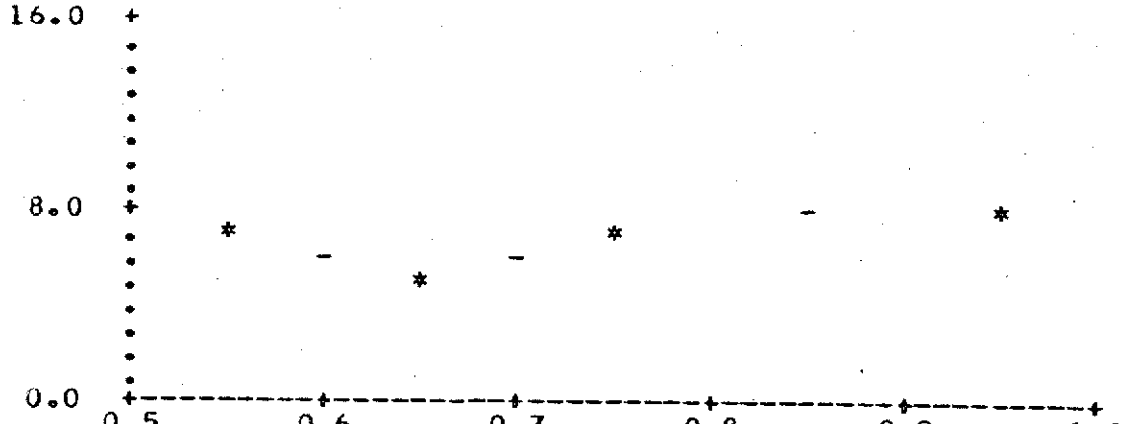
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 6.55 | 0.36 | .5 - .6 |
| BAND 5 | 4.52 | 0.39 | .6 - .7 |
| BAND 6 | 7.43 | 0.26 | .7 - .8 |
| BAND 7 | 7.68 | 0.29 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.827 | 0.246 | -0.188 |
| BAND 5 | 0.827 | 1.000 | 0.040 | -0.315 |
| BAND 6 | 0.246 | 0.040 | 1.000 | 0.360 |
| BAND 7 | -0.188 | -0.315 | 0.360 | 1.000 |

BAND RATIO PARAMETER 0.259
TRANSFORMED PARAMETER 0.871



RADIANCE VS WAVELENGTH

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DATA ANALYSIS LABORATORY 04JAN74



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# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1310-18212
DATE ACQUIRED: 29MAY73

CELLS 1771 TO 1778
LINES 1232 TO 1236
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

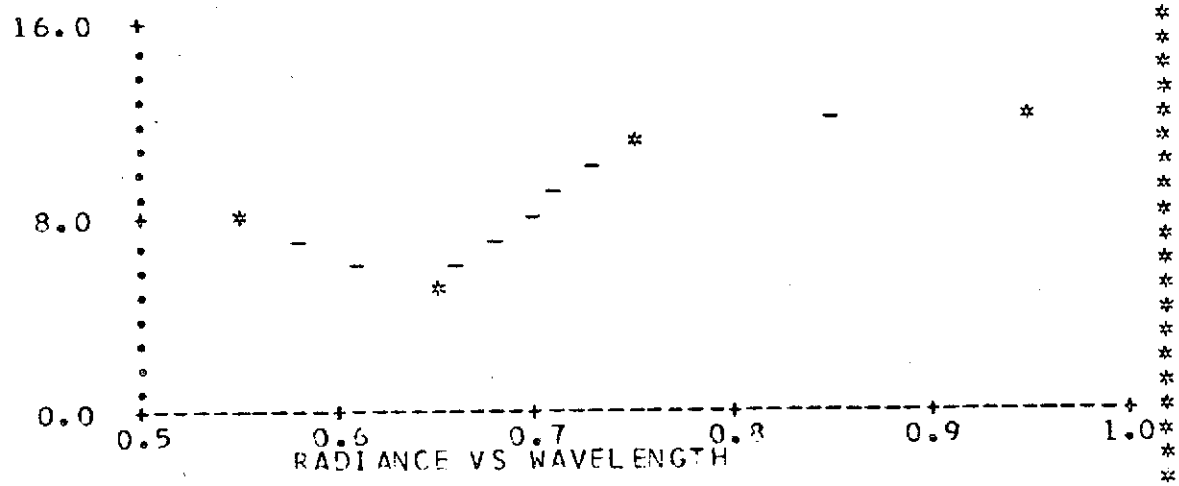
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.67 | 0.65 | .5 - .6 |
| BAND 5 | 4.90 | 1.02 | .6 - .7 |
| BAND 6 | 11.04 | 1.29 | .7 - .8 |
| BAND 7 | 11.94 | 2.06 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.931 | -0.867 | -0.890 |
| BAND 5 | 0.931 | 1.000 | -0.905 | -0.948 |
| BAND 6 | -0.867 | -0.905 | 1.000 | 0.969 |
| BAND 7 | -0.890 | -0.948 | 0.969 | 1.000 |

BAND RATIO PARAMETER 0.418
TRANSFORMED PARAMETER 0.958



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1310-18212
DATE ACQUIRED: 29MAY73

CELLS 1759 TO 1764
LINES 1248 TO 1254
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

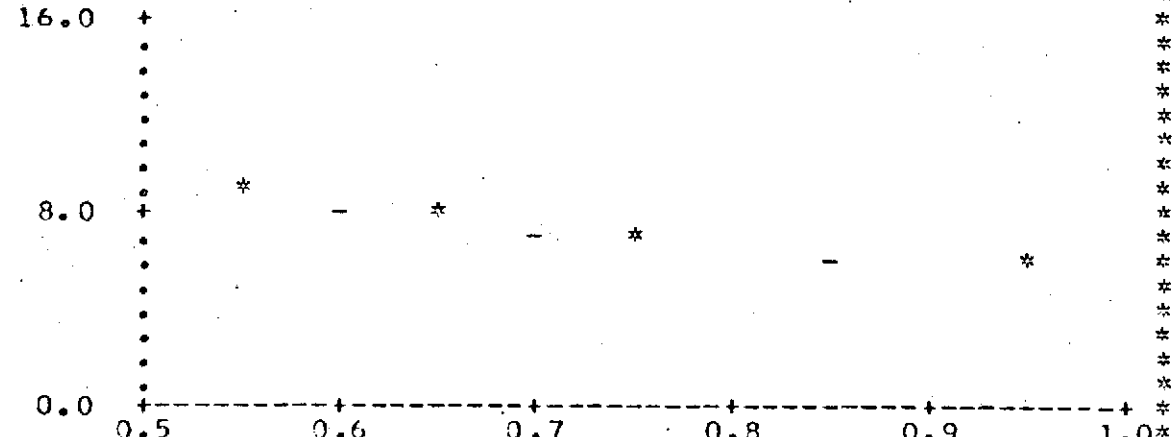
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.19 | 0.51 | .5 - .6 |
| BAND 5 | 7.60 | 0.63 | .6 - .7 |
| BAND 6 | 7.28 | 0.56 | .7 - .8 |
| BAND 7 | 6.19 | 0.71 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.824 | 0.080 | 0.022 |
| BAND 5 | 0.824 | 1.000 | -0.090 | -0.199 |
| BAND 6 | 0.080 | -0.090 | 1.000 | 0.901 |
| BAND 7 | 0.022 | -0.199 | 0.901 | 1.000 |

BAND RATIO PARAMETER -0.102
TRANSFORMED PARAMETER 0.631



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1310-18212
DATE ACQUIRED: 29MAY73

CELLS 1755 TO 1764
LINES 1268 TO 1274
TOTAL POINTS 70

***CORRECTED FOR SUN ELEVATION 58 DEGREES***

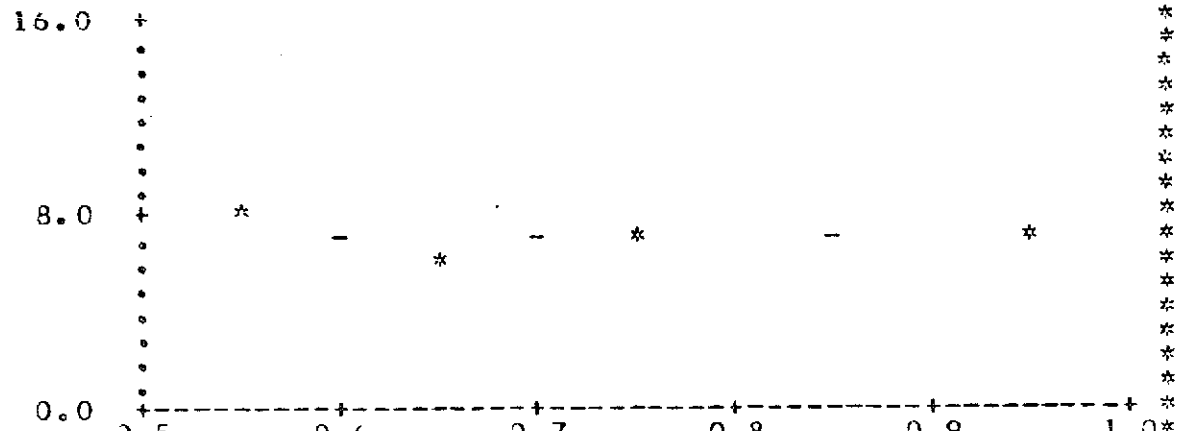
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 7.89 | 0.45 | .5 - .6 |
| BAND 5 | 5.83 | 0.57 | .6 - .7 |
| BAND 6 | 7.18 | 0.30 | .7 - .8 |
| BAND 7 | 6.78 | 0.42 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.776 | -0.235 | -0.555 |
| BAND 5 | 0.776 | 1.000 | -0.062 | -0.495 |
| BAND 6 | -0.235 | -0.062 | 1.000 | 0.595 |
| BAND 7 | -0.555 | -0.495 | 0.595 | 1.000 |

BAND RATIO PARAMETER 0.075
TRANSFORMED PARAMETER 0.758



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1364-18204
DATE ACQUIRED: 22JUL73

CELLS 1719 TO 1724
LINES 1009 TO 1014
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

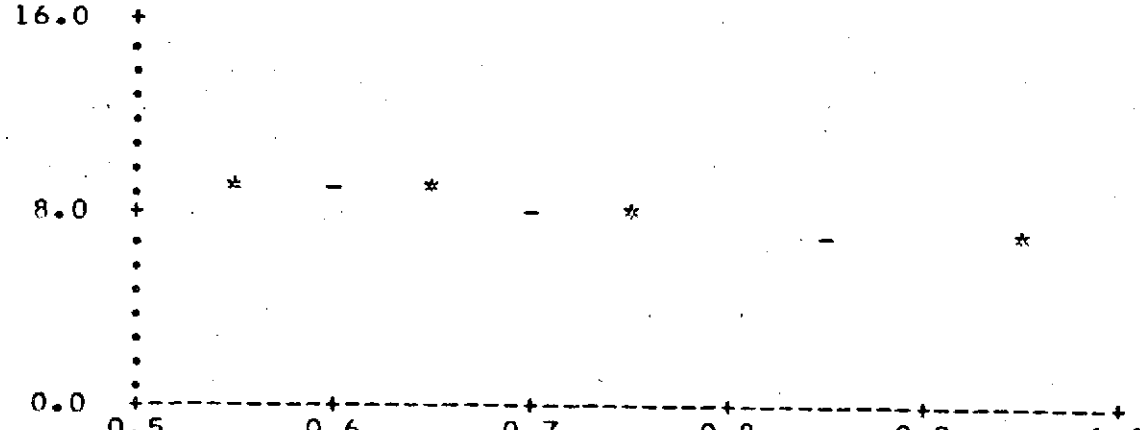
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.39 | 0.43 | .5 - .6 |
| BAND 5 | 8.97 | 0.75 | .6 - .7 |
| BAND 6 | 8.25 | 0.56 | .7 - .8 |
| BAND 7 | 7.06 | 0.76 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.823 | 0.214 | -0.108 |
| BAND 5 | 0.823 | 1.000 | 0.252 | -0.111 |
| BAND 6 | 0.214 | 0.252 | 1.000 | 0.837 |
| BAND 7 | -0.108 | -0.111 | 0.837 | 1.000 |

BAND RATIO PARAMETER -0.120
TRANSFORMED PARAMETER 0.617



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28MAY74

# ERTS-1
## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 P
IMAGE IDENTIFIER: 1364-18204
DATE ACQUIRED: 22JUL73

CELLS 1703 TO 1708
LINES 1026 TO 1031
TOTAL POINTS 36

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

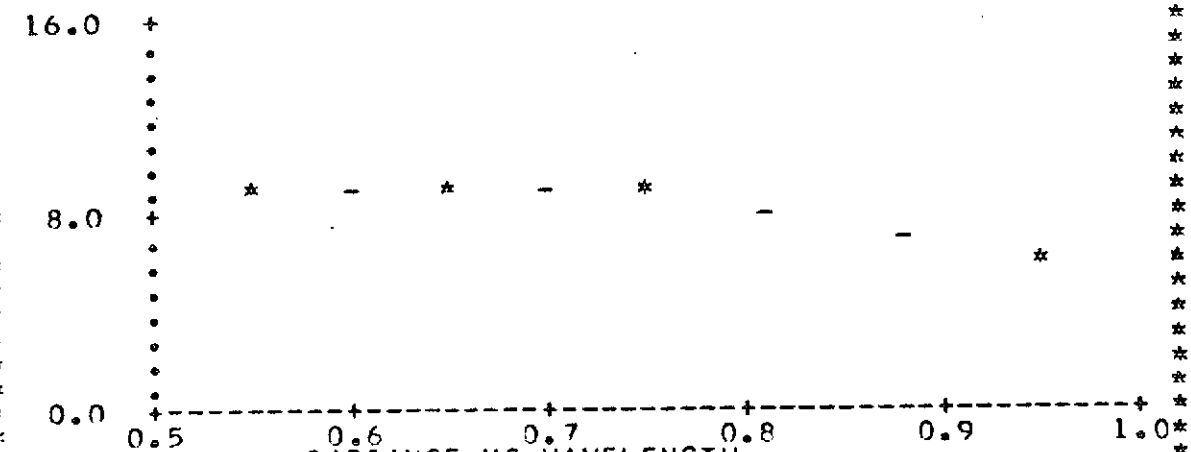
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.34 | 0.53 | .5 - .6 |
| BAND 5 | 8.52 | 0.54 | .6 - .7 |
| BAND 6 | 9.09 | 4.10 | .7 - .8 |
| BAND 7 | 6.10 | 0.67 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.484 | 0.187 | -0.168 |
| BAND 5 | 0.484 | 1.000 | -0.142 | 0.047 |
| BAND 6 | 0.187 | -0.142 | 1.000 | 0.348 |
| BAND 7 | -0.168 | 0.047 | 0.348 | 1.000 |

BAND RATIO PARAMETER -0.166
TRANSFORMED PARAMETER 0.578



RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28MAY74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1364-18204
DATE ACQUIRED: 22JUL73

CELLS 1701 TO 1708
LINES 1045 TO 1051
TOTAL POINTS 56

***CORRECTED FOR SUN ELEVATION 56 DEGREES***

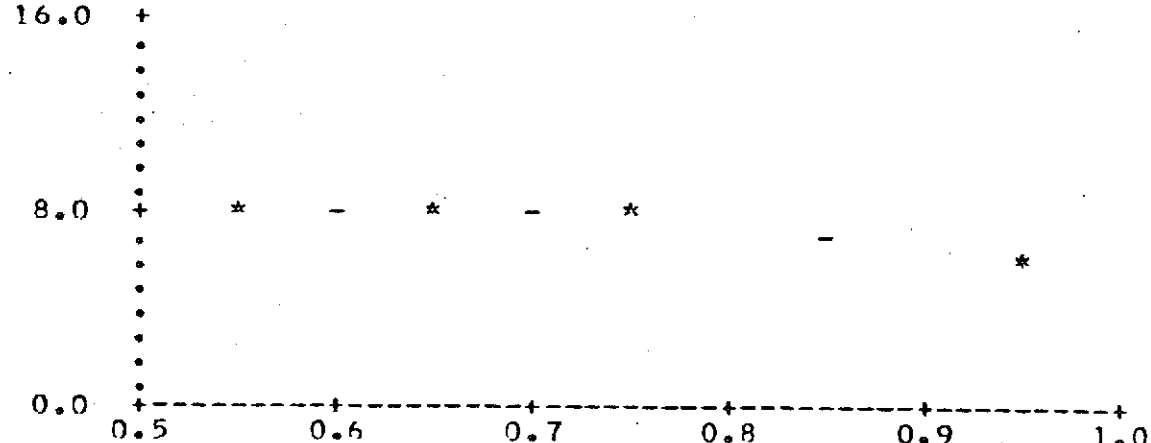
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 8.44 | 0.50 | .5 - .6 |
| BAND 5 | 7.71 | 1.99 | .6 - .7 |
| BAND 6 | 7.83 | 2.71 | .7 - .8 |
| BAND 7 | 6.40 | 0.62 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.190 | 0.352 | 0.527 |
| BAND 5 | 0.190 | 1.000 | 0.164 | 0.446 |
| BAND 6 | 0.352 | 0.164 | 1.000 | 0.282 |
| BAND 7 | 0.527 | 0.446 | 0.282 | 1.000 |

BAND RATIO PARAMETER -0.093
TRANSFORMED PARAMETER 0.638




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 28MAY74



ORIGINAL PAGE IS
OF POOR QUALITY

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1382-18203
DATE ACQUIRED: 09AUG73

CELLS 1683 TO 1688
LINES 971 TO 975
TOTAL POINTS 30

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

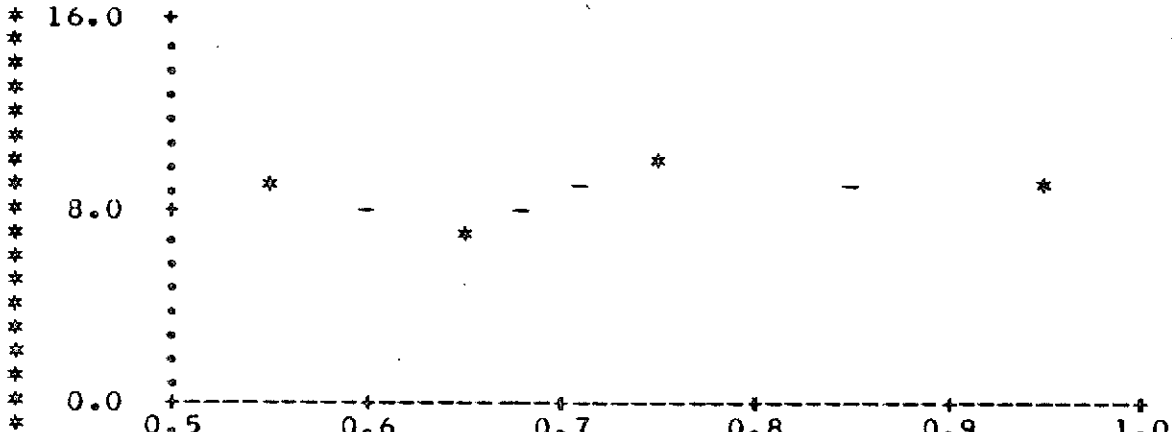
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.05 | 0.48 | .5 - .6 |
| BAND 5 | 6.92 | 0.74 | .6 - .7 |
| BAND 6 | 9.78 | 0.64 | .7 - .8 |
| BAND 7 | 9.49 | 0.85 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.715 | 0.261 | -0.019 |
| BAND 5 | 0.715 | 1.000 | 0.178 | -0.062 |
| BAND 6 | 0.261 | 0.178 | 1.000 | 0.879 |
| BAND 7 | -0.019 | -0.062 | 0.879 | 1.000 |

BAND RATIO PARAMETER 0.157
TRANSFORMED PARAMETER 0.811




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 04JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1382-18203
DATE ACQUIRED: 09AUG73

CELLS 1669 TO 1674
LINES 987 TO 993
TOTAL POINTS 42

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

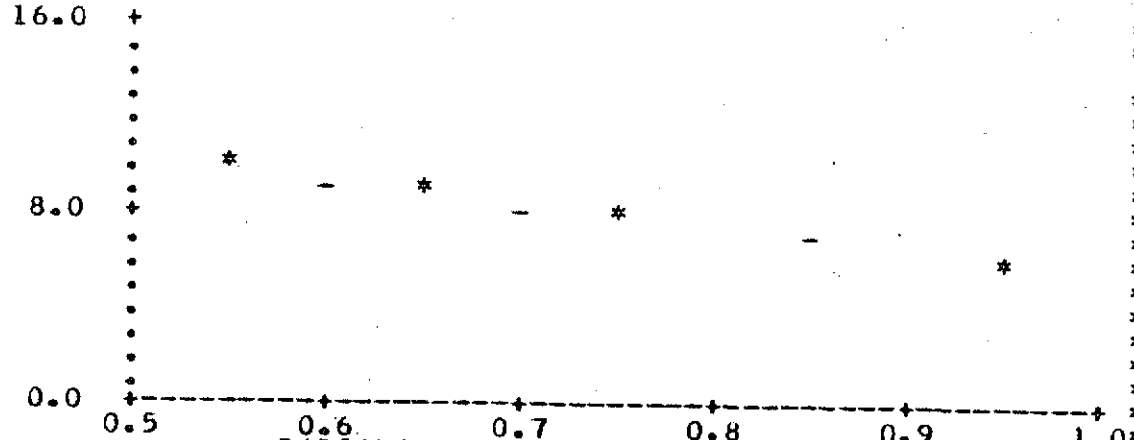
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 10.40 | 1.07 | .5 - .6 |
| BAND 5 | 9.43 | 1.59 | .6 - .7 |
| BAND 6 | 7.93 | 1.65 | .7 - .8 |
| BAND 7 | 6.28 | 1.51 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.957 | 0.920 | 0.850 |
| BAND 5 | 0.957 | 1.000 | 0.939 | 0.878 |
| BAND 6 | 0.920 | 0.939 | 1.000 | 0.969 |
| BAND 7 | 0.850 | 0.878 | 0.969 | 1.000 |

BAND RATIO PARAMETER -0.200
TRANSFORMED PARAMETER 0.548




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 04JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1382-18203
DATE ACQUIRED: 09AUG73

CELLS 1665 TO 1676
LINES 1007 TO 1012
TOTAL POINTS 72

***CORRECTED FOR SUN ELEVATION 52 DEGREES***

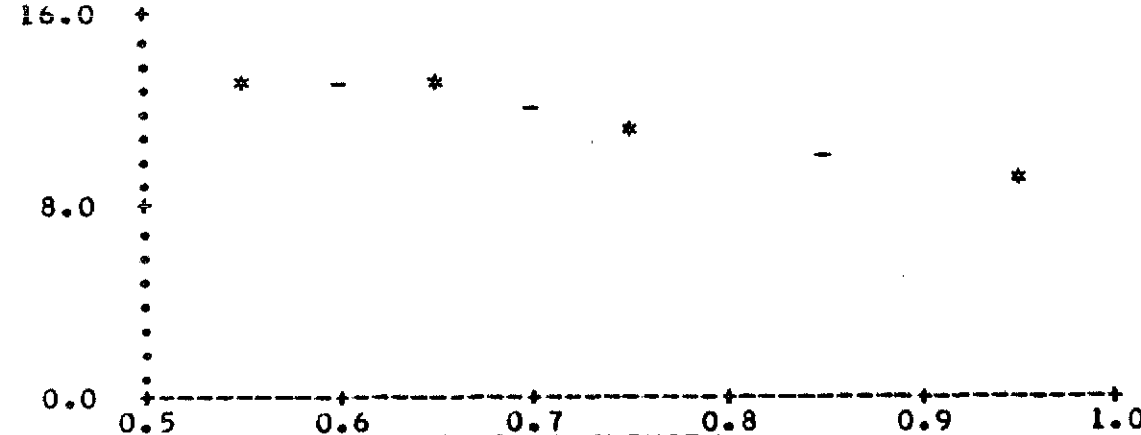
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 12.60 | 1.30 | .5 - .6 |
| BAND 5 | 12.78 | 1.72 | .6 - .7 |
| BAND 6 | 11.03 | 1.54 | .7 - .8 |
| BAND 7 | 8.95 | 1.32 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.941 | 0.923 | 0.897 |
| BAND 5 | 0.941 | 1.000 | 0.955 | 0.927 |
| BAND 6 | 0.923 | 0.955 | 1.000 | 0.967 |
| BAND 7 | 0.897 | 0.927 | 0.967 | 1.000 |

BAND RATIO PARAMETER -0.176
TRANSFORMED PARAMETER 0.569




RADIANCE VS WAVELENGTH

PREPARED BY:TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 04JAN74

# ERTS-1
# SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 A
IMAGE IDENTIFIER: 1400-18201
DATE ACQUIRED: 27AUG73

CELLS 1681 TO 1688
LINES 1031 TO 1035
TOTAL POINTS 40

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

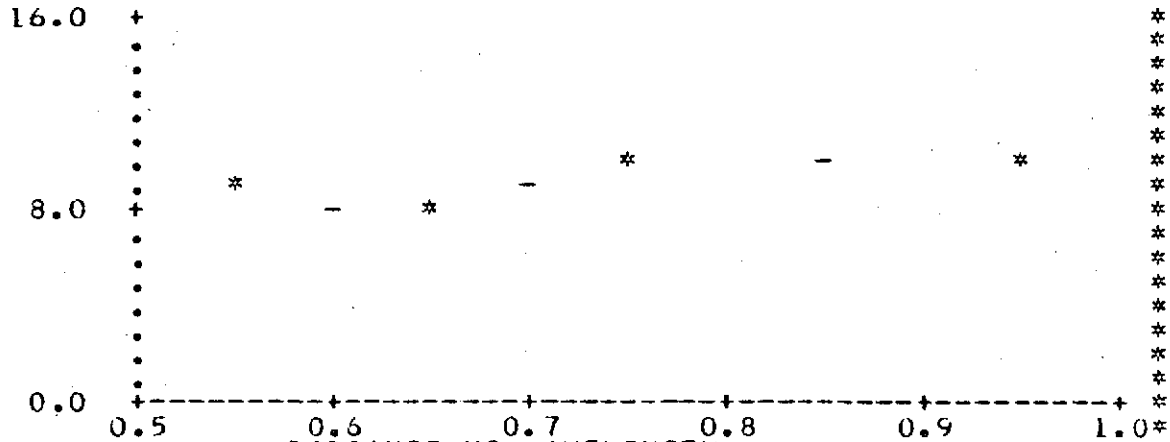
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.18 | 1.20 | .5 - .6 |
| BAND 5 | 7.60 | 1.96 | .6 - .7 |
| BAND 6 | 10.02 | 0.90 | .7 - .8 |
| BAND 7 | 9.75 | 0.66 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.953 | 0.760 | 0.320 |
| BAND 5 | 0.953 | 1.000 | 0.706 | 0.218 |
| BAND 6 | 0.760 | 0.706 | 1.000 | 0.728 |
| BAND 7 | 0.320 | 0.218 | 0.728 | 1.000 |

BAND RATIO PARAMETER 0.124
TRANSFORMED PARAMETER 0.790



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

# ERTS-1

## SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 R
IMAGE IDENTIFIER: 1400-18201
DATE ACQUIRED: 27AUG73

CELLS 1667 TO 1670
LINES 1047 TO 1053
TOTAL POINTS 28

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

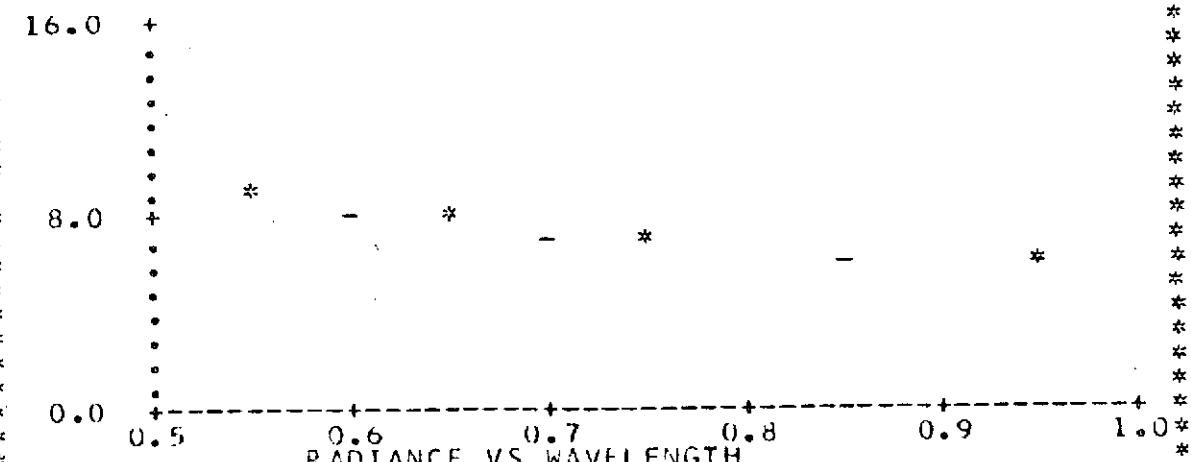
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 9.15 | 0.53 | .5 - .6 |
| BAND 5 | 7.78 | 0.75 | .6 - .7 |
| BAND 6 | 6.93 | 2.29 | .7 - .8 |
| BAND 7 | 5.82 | 0.96 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.700 | -0.002 | 0.169 |
| BAND 5 | 0.700 | 1.000 | -0.009 | 0.054 |
| BAND 6 | -0.002 | -0.009 | 1.000 | 0.285 |
| BAND 7 | 0.169 | 0.054 | 0.285 | 1.000 |

BAND RATIO PARAMETER -0.144
TRANSFORMED PARAMETER 0.597




RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

ERTS-1

SITE PROCESSING REPORT

SITE DESIGNATOR: CV10 W
IMAGE IDENTIFIER: 1400-18201
DATE ACQUIRED: 27AUG73

CELLS 1665 TO 1674
LINES 1067 TO 1072
TOTAL POINTS 60

***CORRECTED FOR SUN ELEVATION 47 DEGREES***

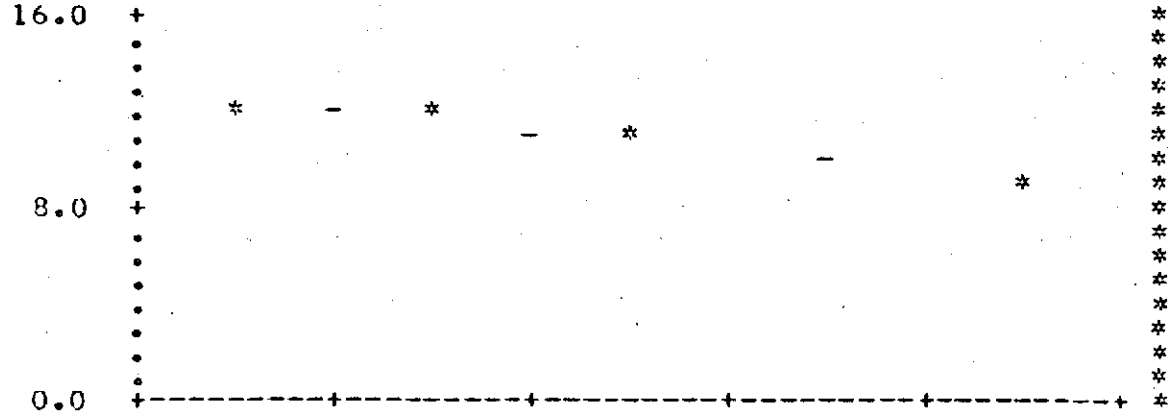
RADIANCE(MWATTS/SQCM-STR-MICROMETER)

| | MEAN | STANDARD DEVIATION | WAVELENGTH (MICROMETERS) |
|---|---|---|---|
| BAND 4 | 11.66 | 1.24 | .5 - .6 |
| BAND 5 | 12.02 | 1.65 | .6 - .7 |
| BAND 6 | 10.56 | 1.48 | .7 - .8 |
| BAND 7 | 8.81 | 1.44 | .8 -1.1 |

NORMALIZED COVARIANCES

| | BAND 4 | BAND 5 | BAND 6 | BAND 7 |
|---|---|---|---|---|
| BAND 4 | 1.000 | 0.947 | 0.952 | 0.929 |
| BAND 5 | 0.947 | 1.000 | 0.953 | 0.935 |
| BAND 6 | 0.952 | 0.953 | 1.000 | 0.969 |
| BAND 7 | 0.929 | 0.935 | 0.969 | 1.000 |

BAND RATIO PARAMETER -0.154
TRANSFORMED PARAMETER 0.588



RADIANCE VS WAVELENGTH

PREPARED BY: TEXAS A&M UNIVERSITY, REMOTE SENSING CENTER
DATA ANALYSIS LABORATORY 07JAN74

# APPENDIX I

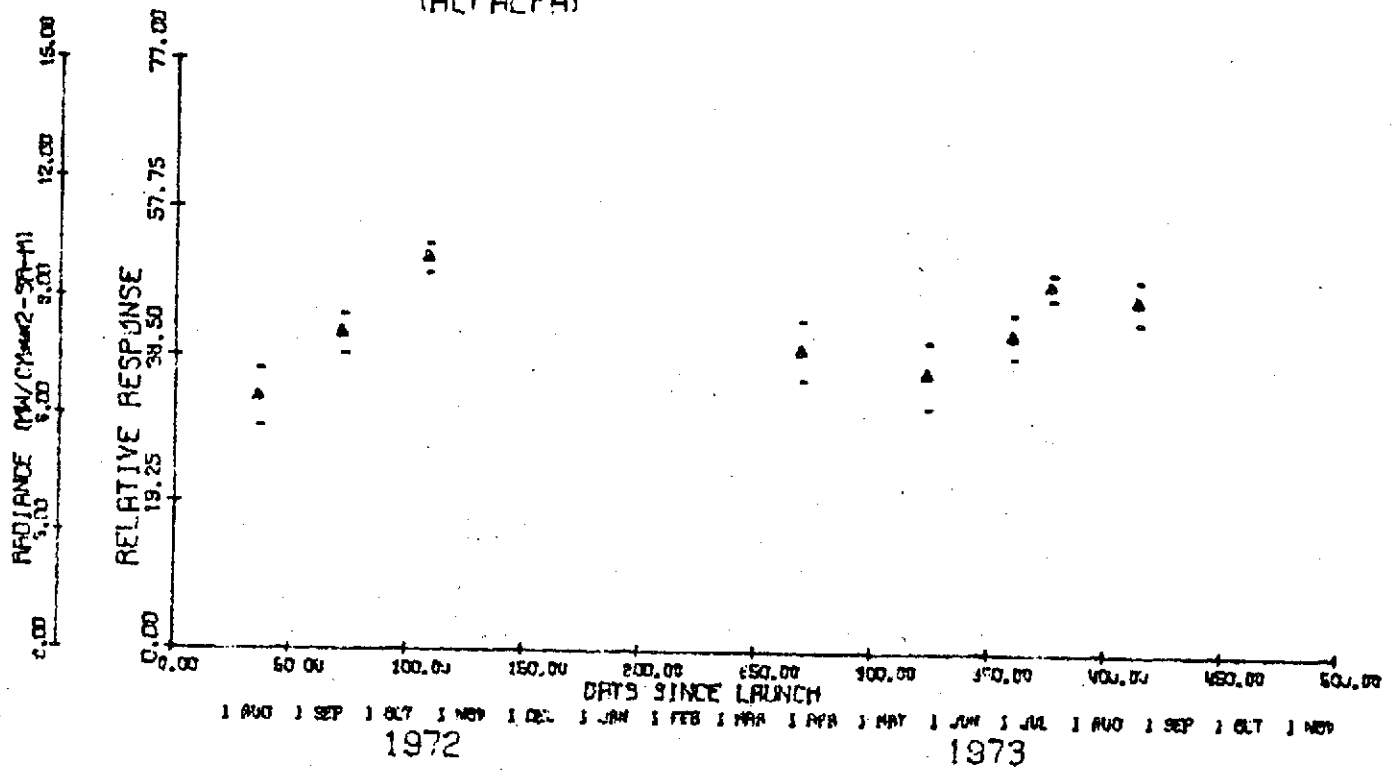
## RELATIVE SPECTRAL RESPONSE GRAPHS FOR WESTERN CORRIDORS

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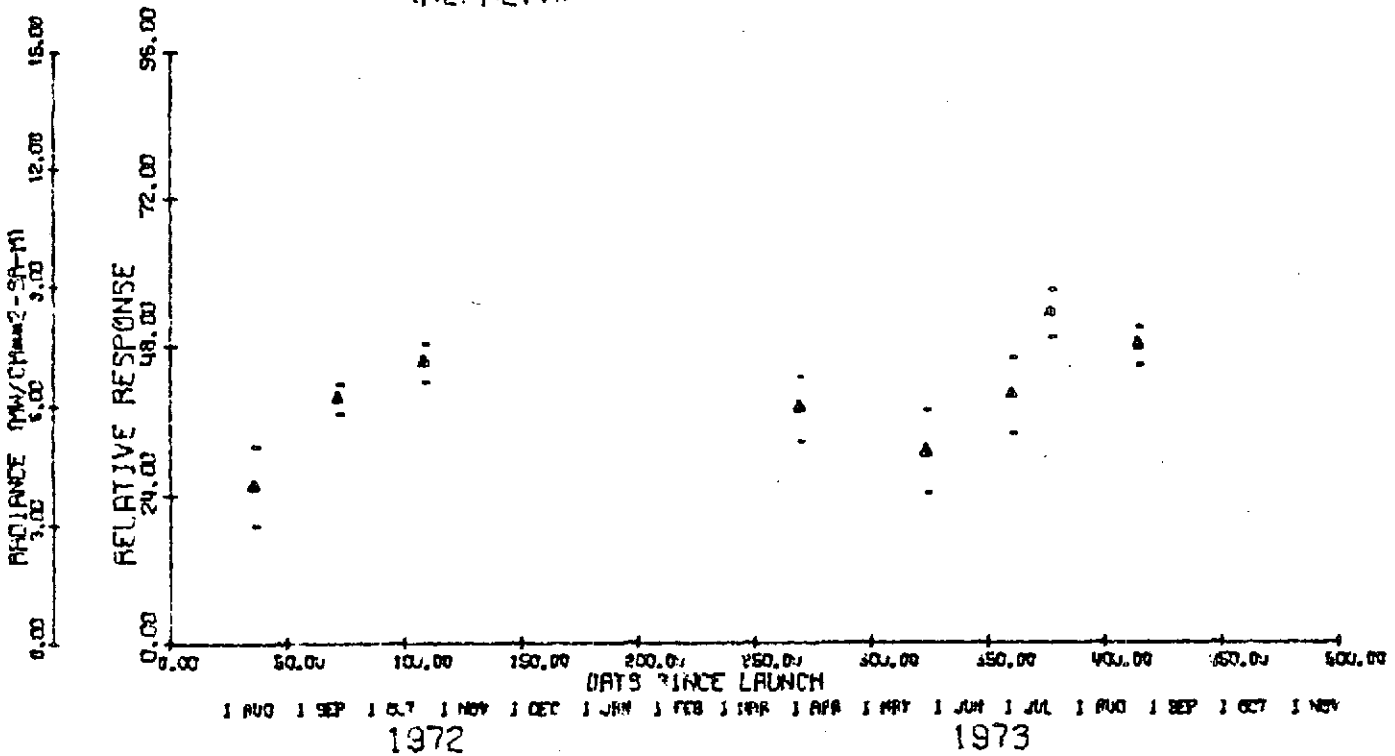
ROCKY MOUNTAIN CORRIDOR

Browning, MT
48°44'N, 113°11'W

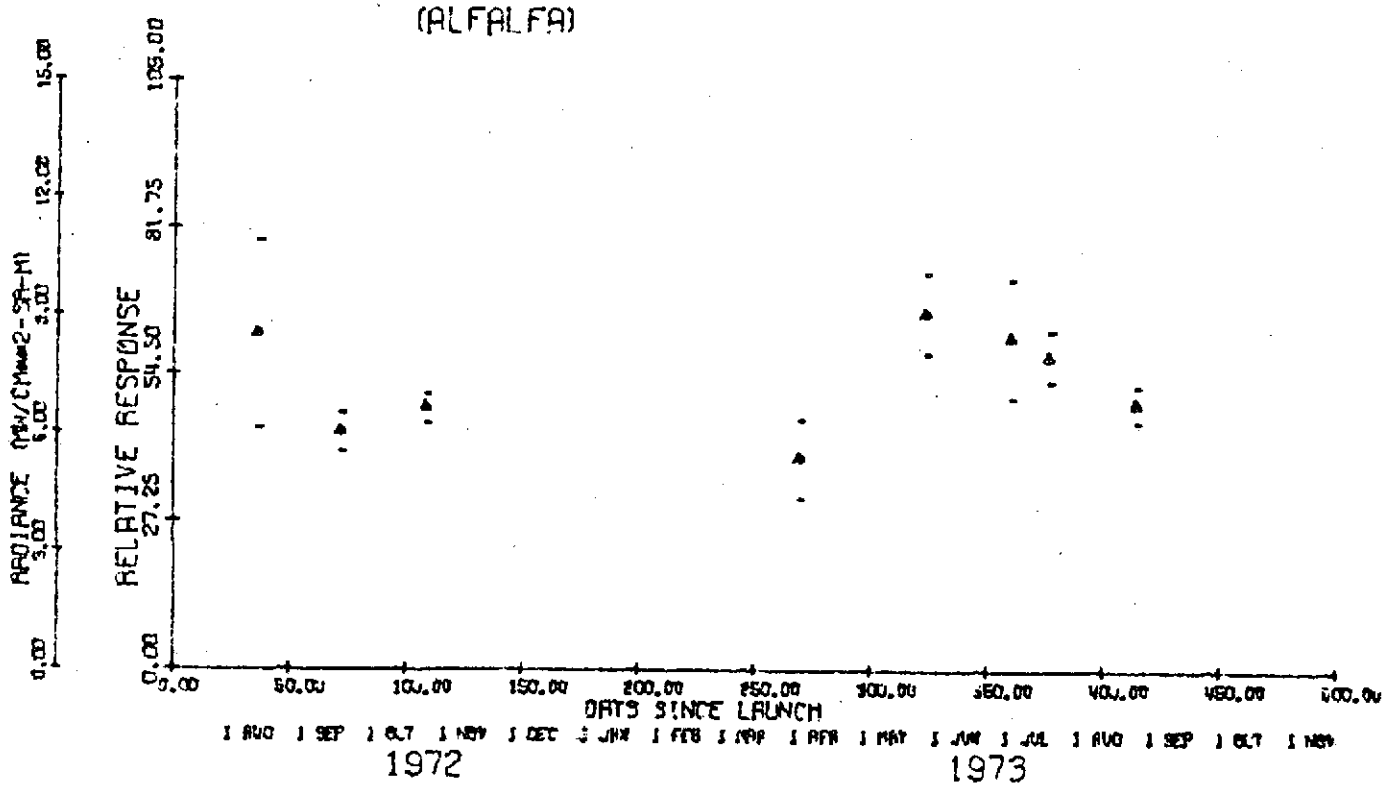
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
BROWNING, MT.
(ALFALFA)



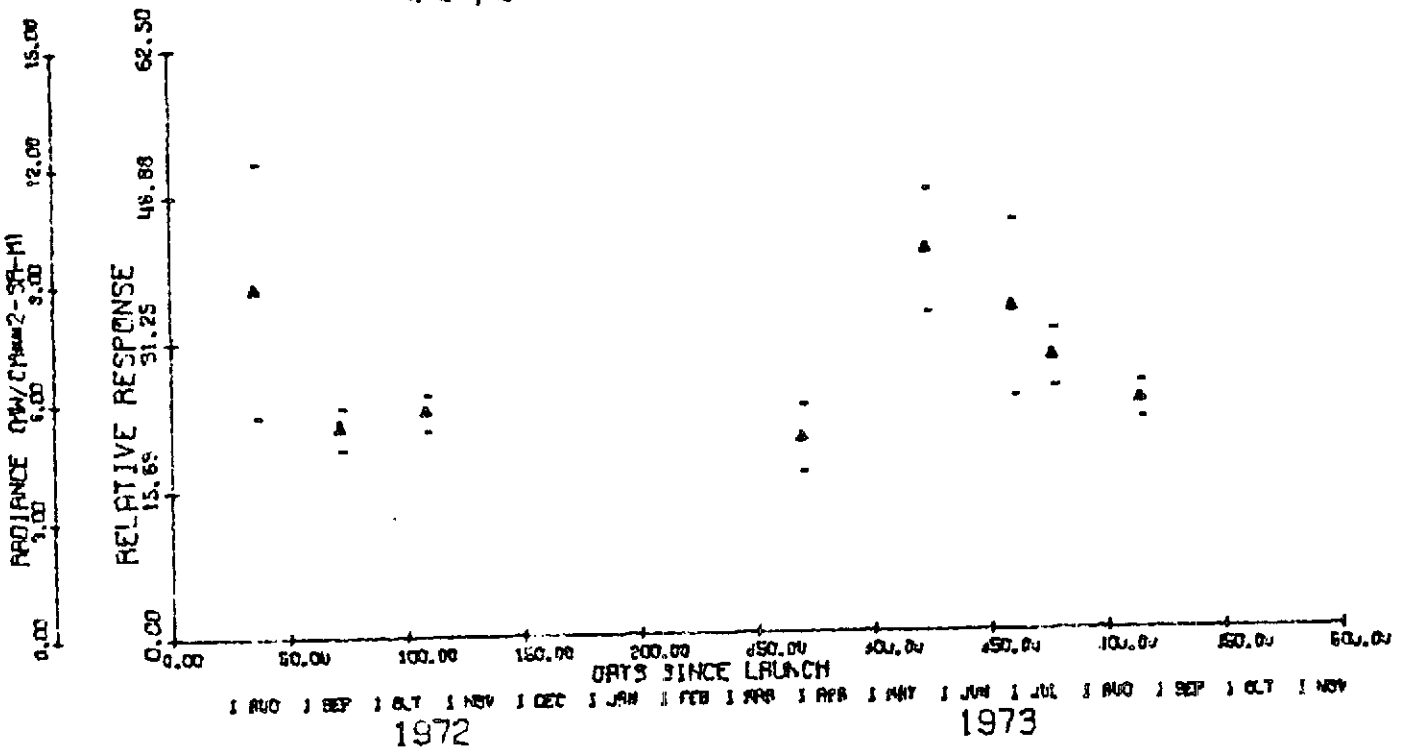
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
BROWNING, MT.
(ALFALFA)



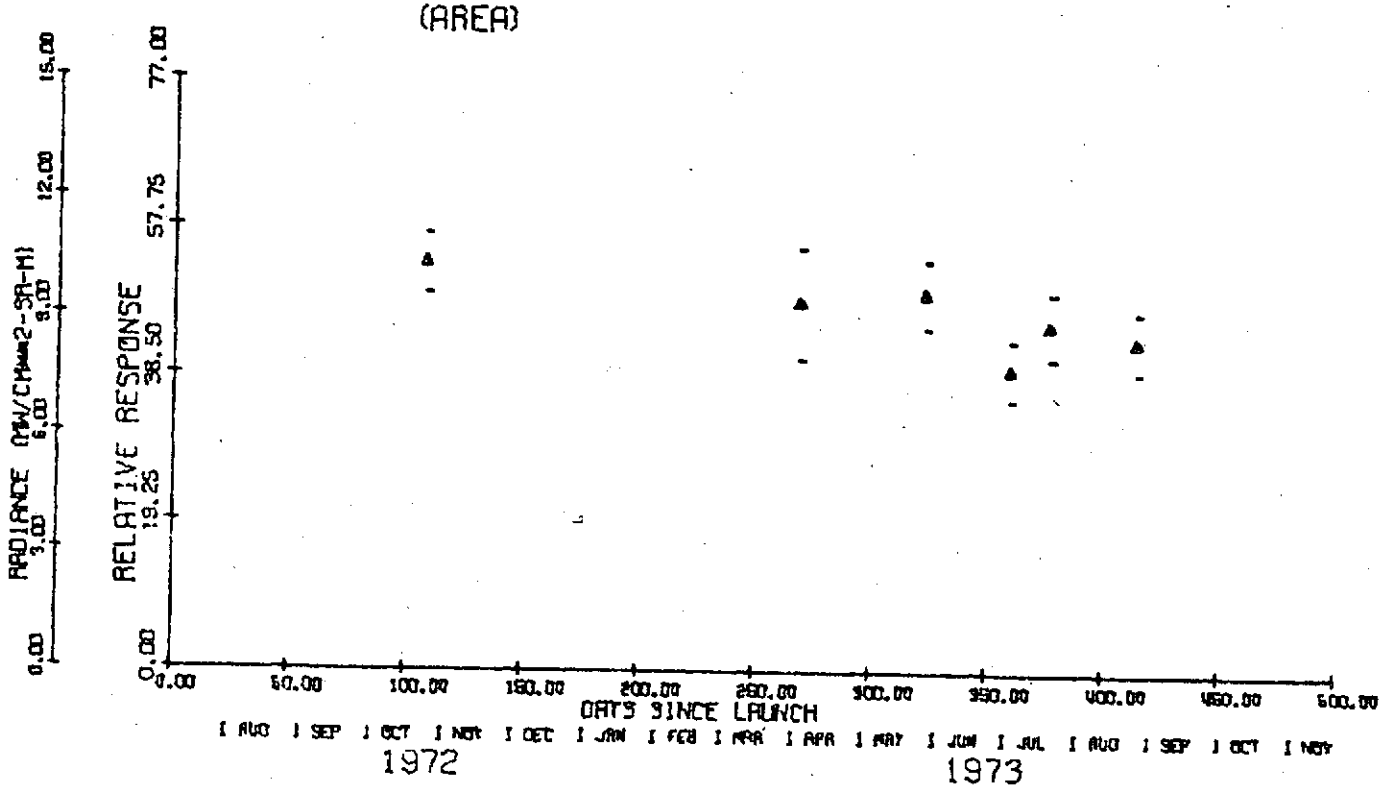
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BROWNING, MT.
(ALFALFA)



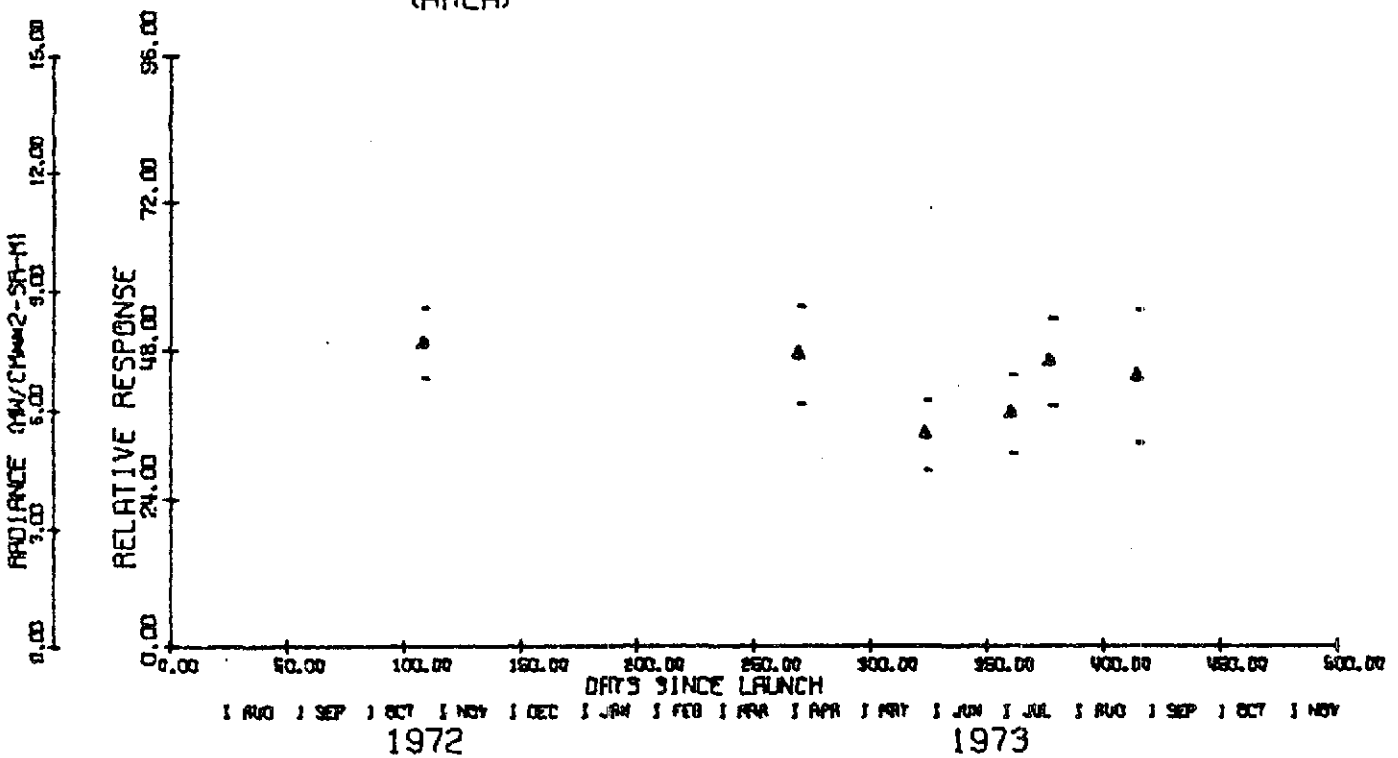
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
BROWNING, MT.
(ALFALFA)



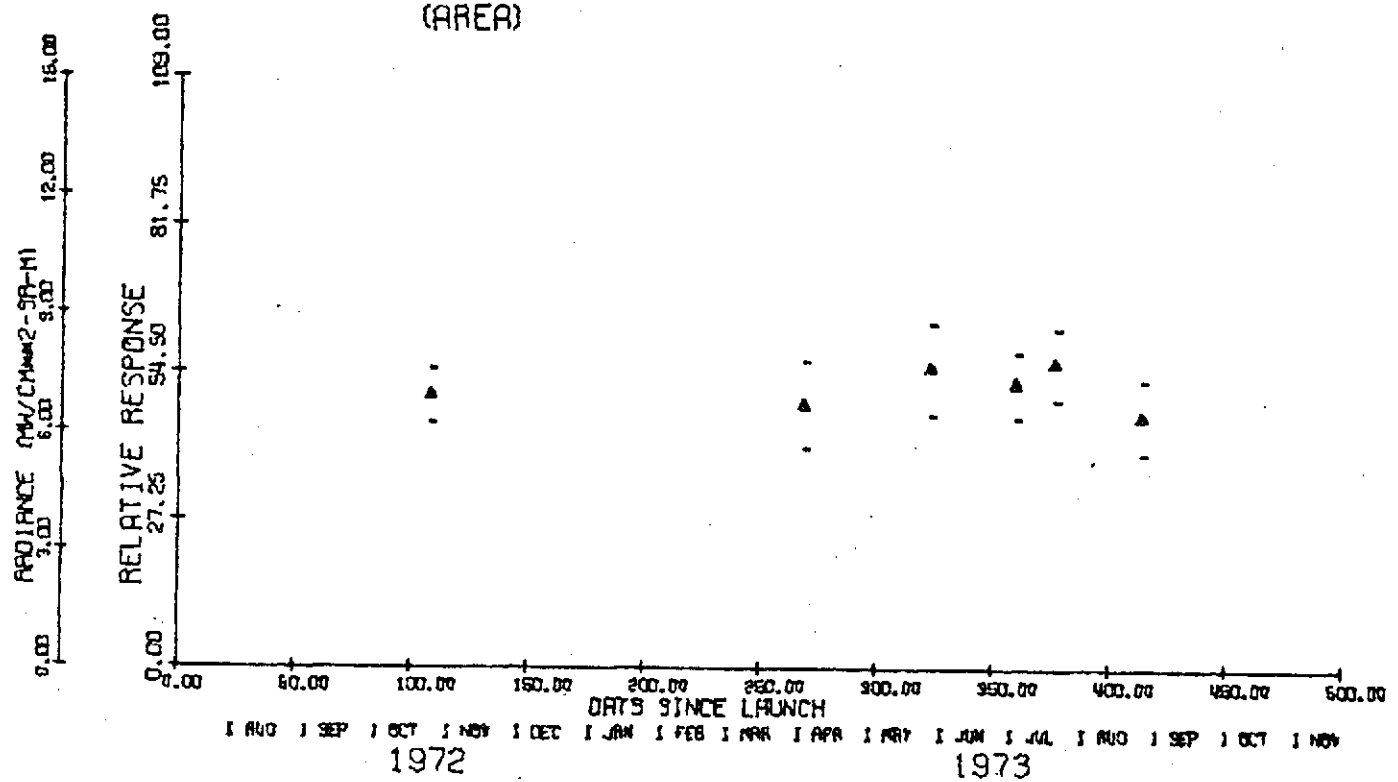
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
BROWNING, MT.
(AREA)



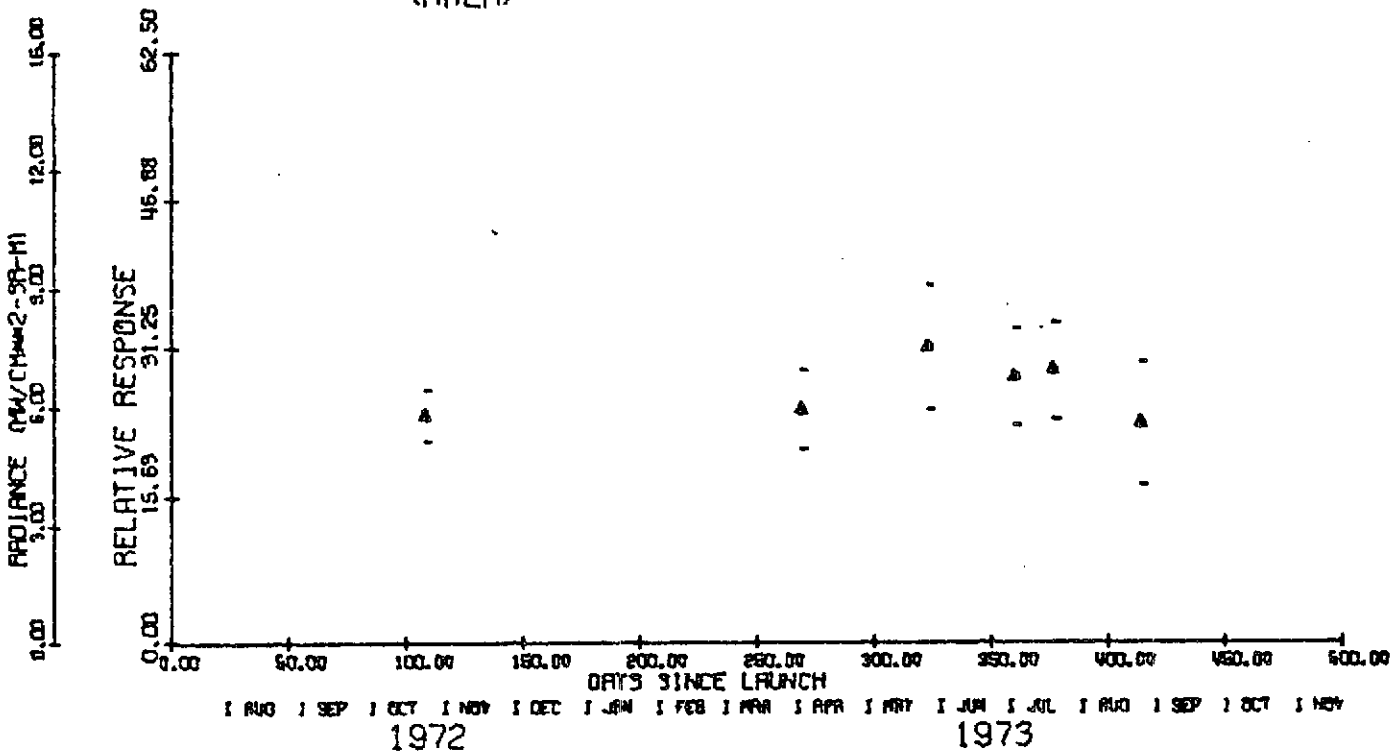
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
BROWNING, MT.
(AREA)



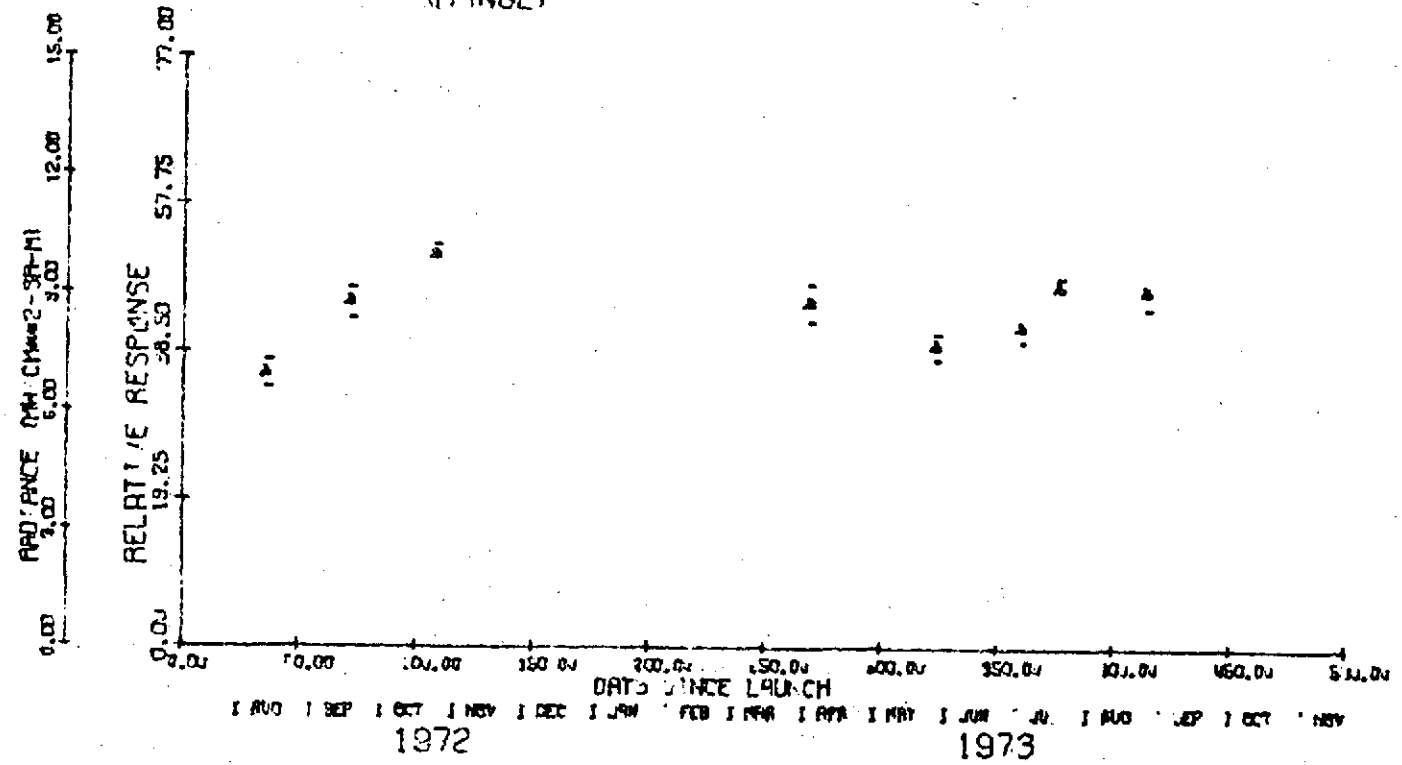
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BROWNING, MT.
(AREA)



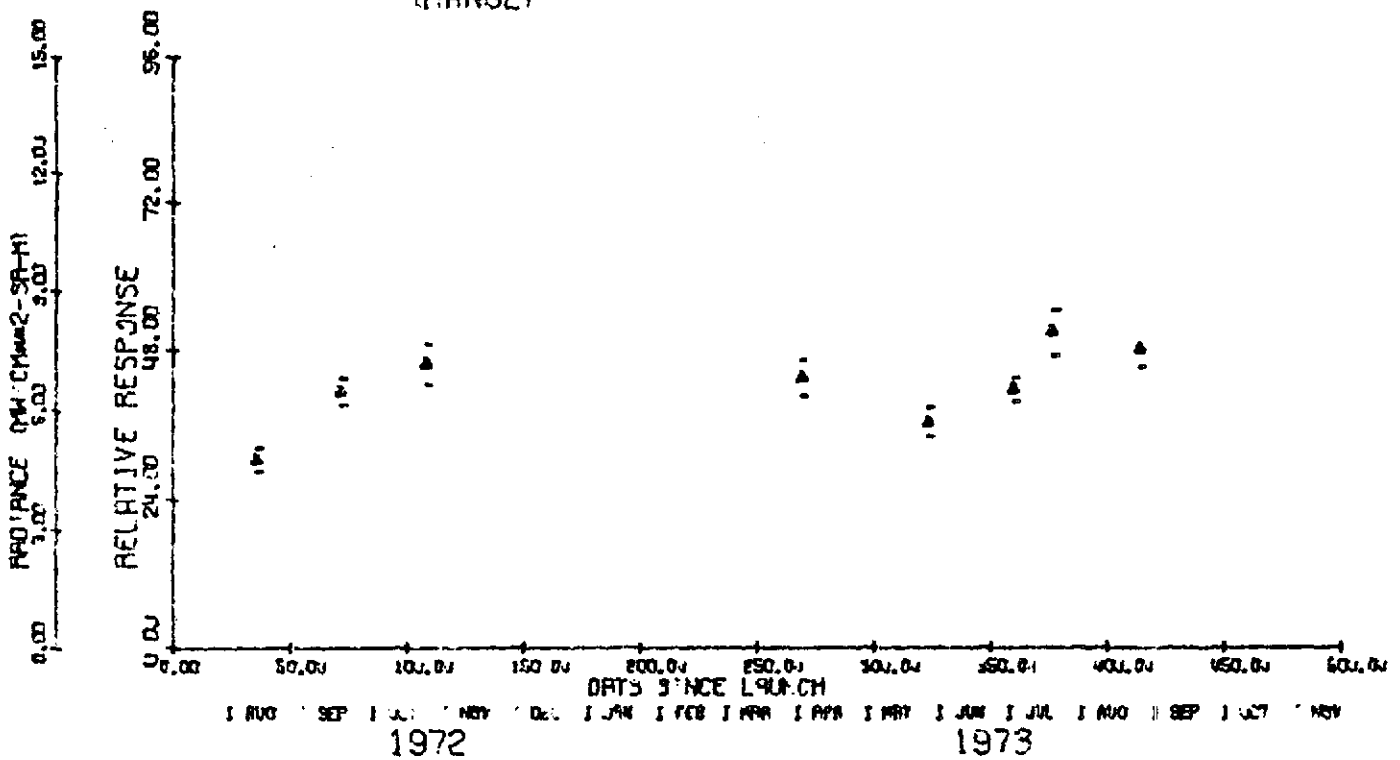
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RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
BROWNING,MT.
(AREA)



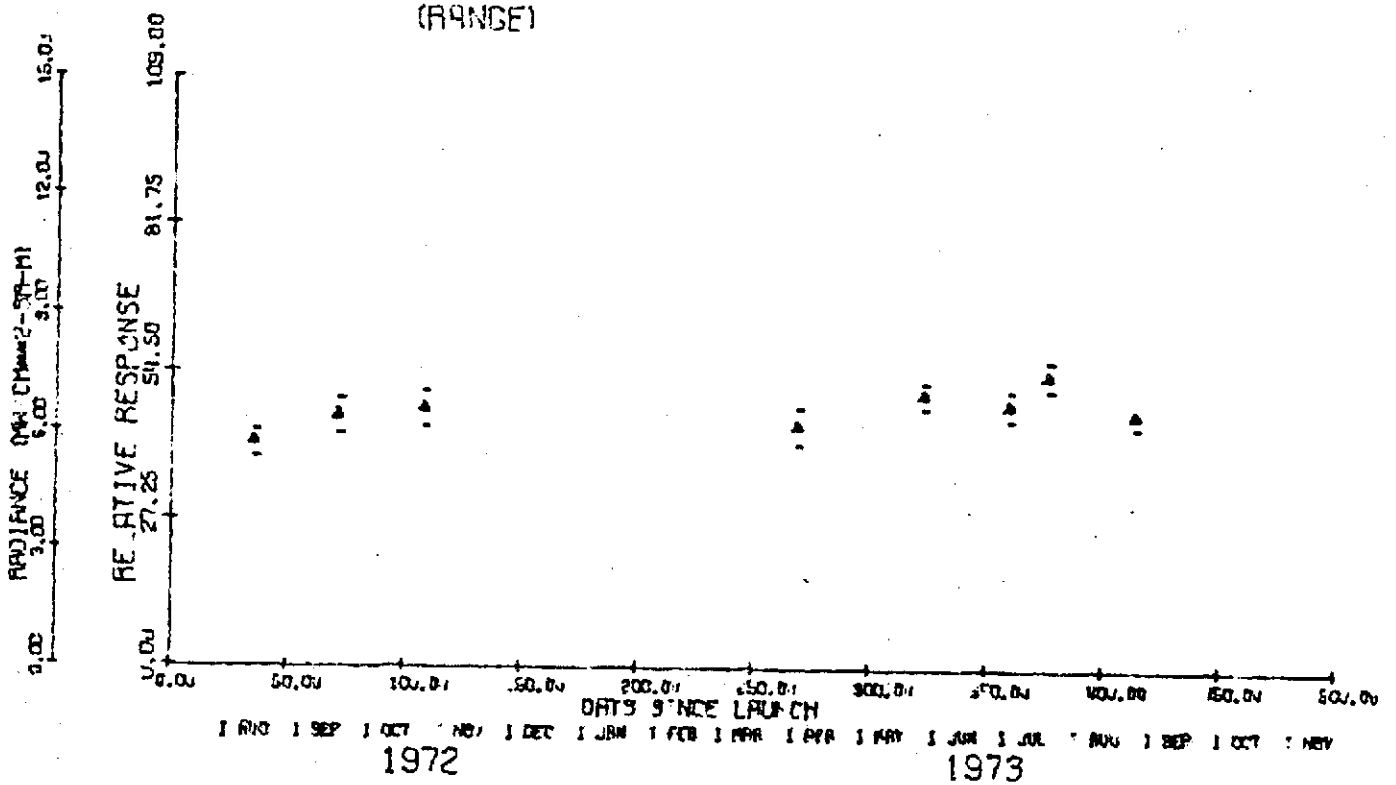
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RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
BROWNING, MT
(RANGE)



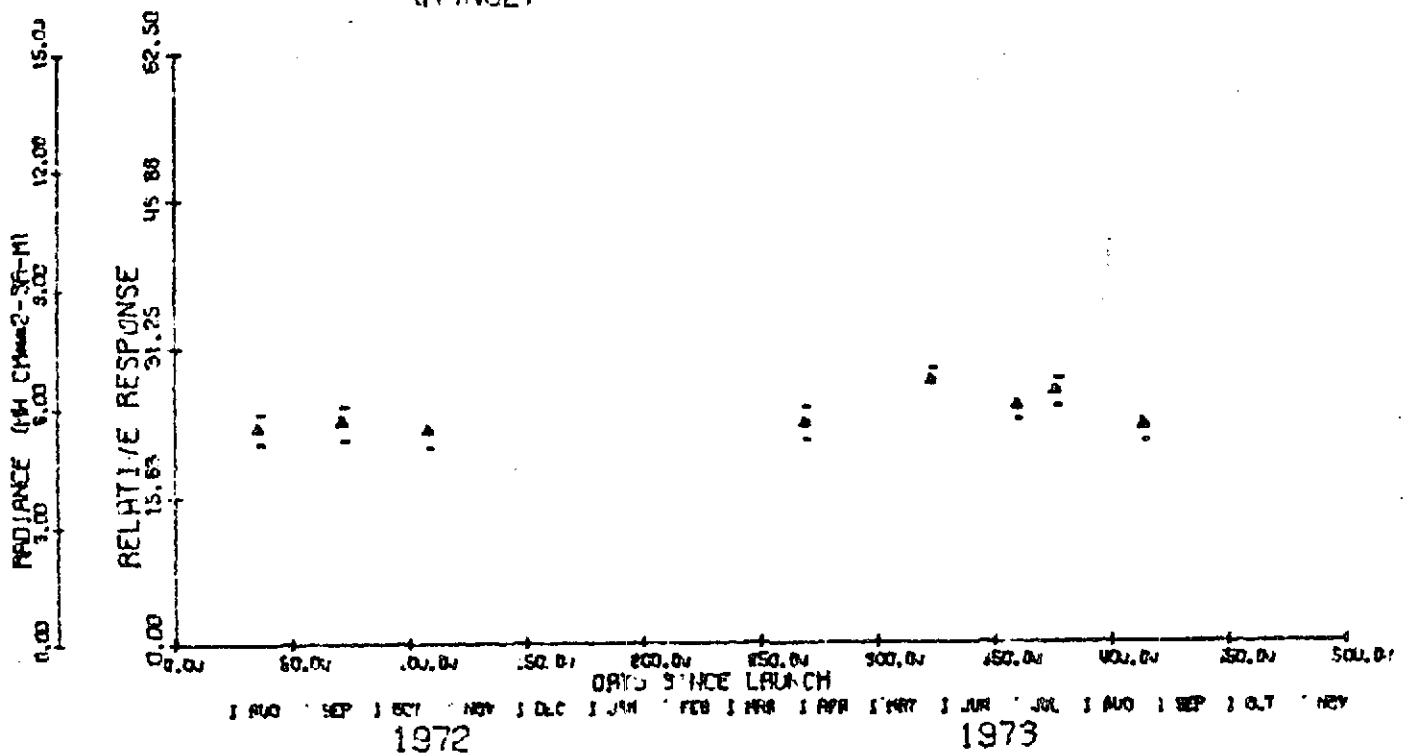
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
BROWNING, MT
(RANGE)



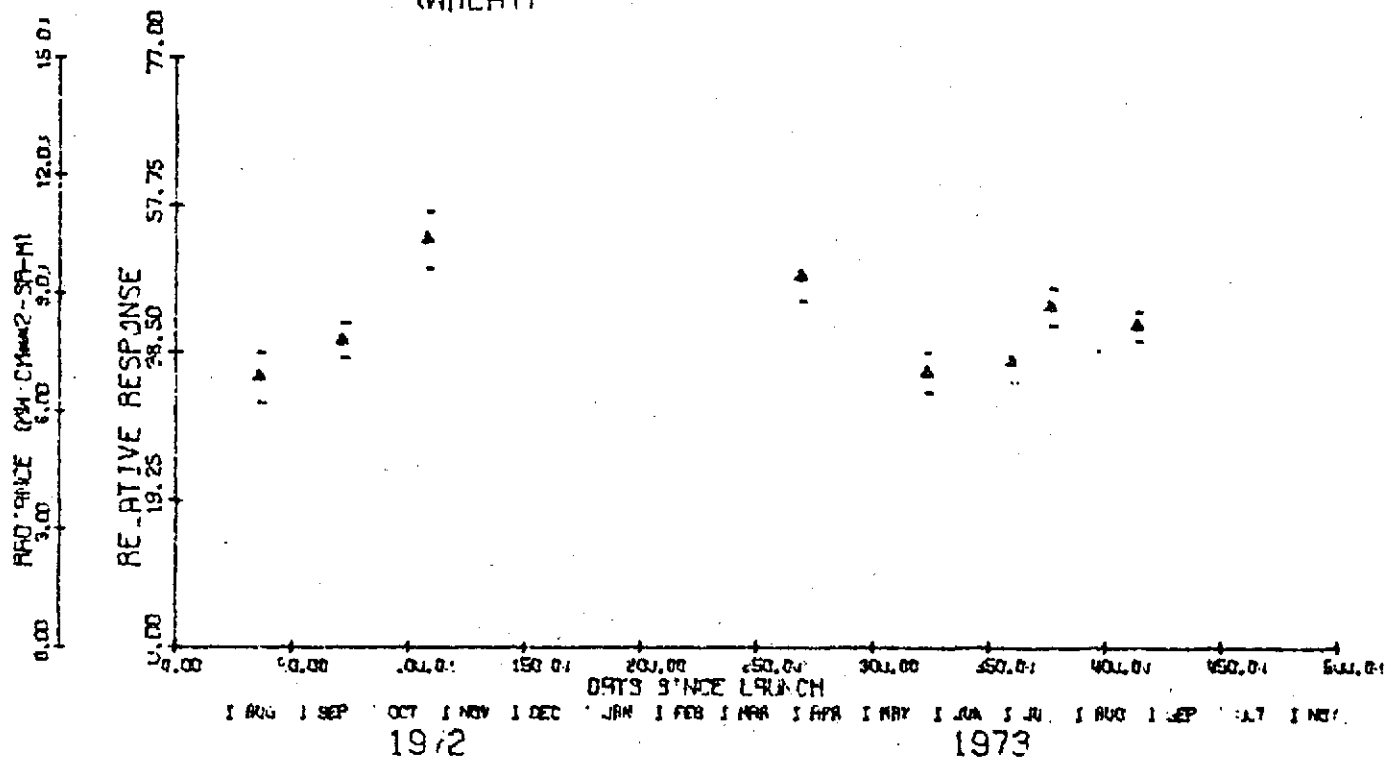
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BROWNING, MT.
(RANGE)



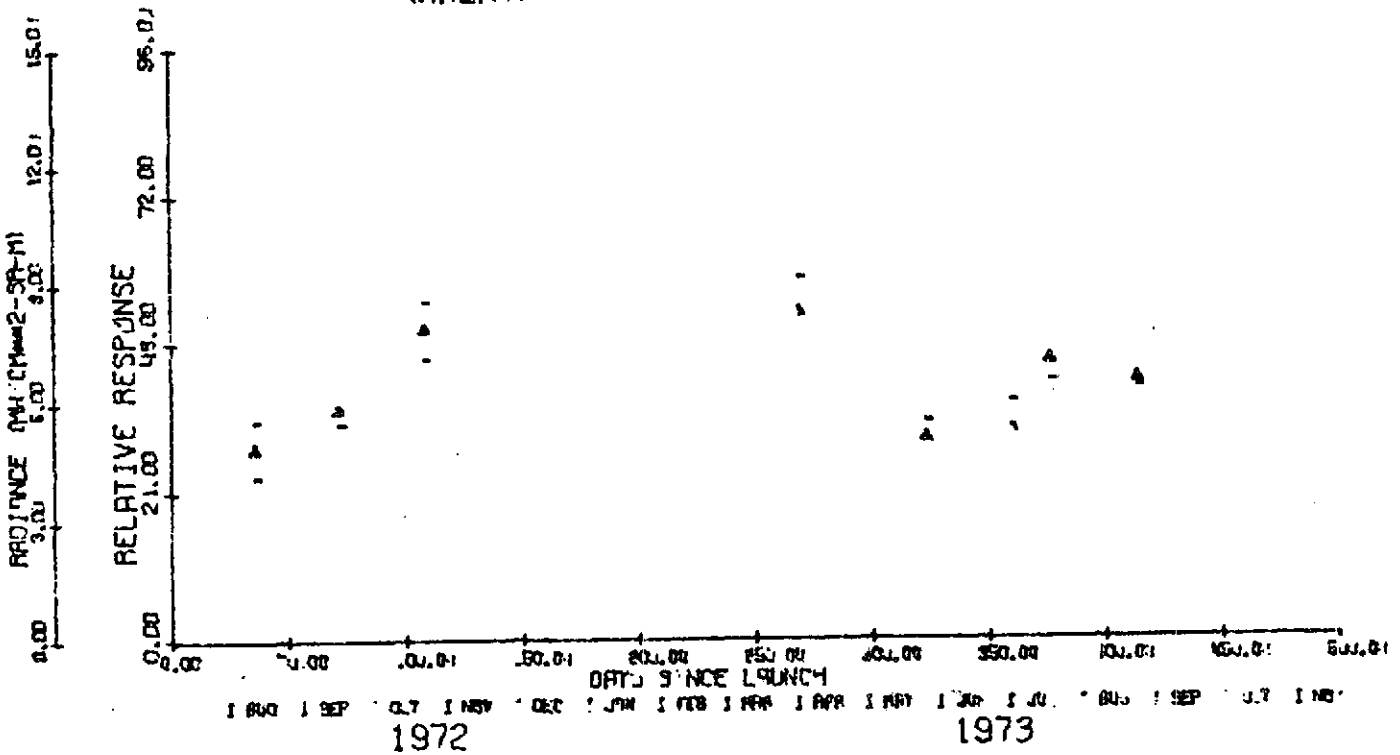
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
BROWNING, MT
(RANGE)



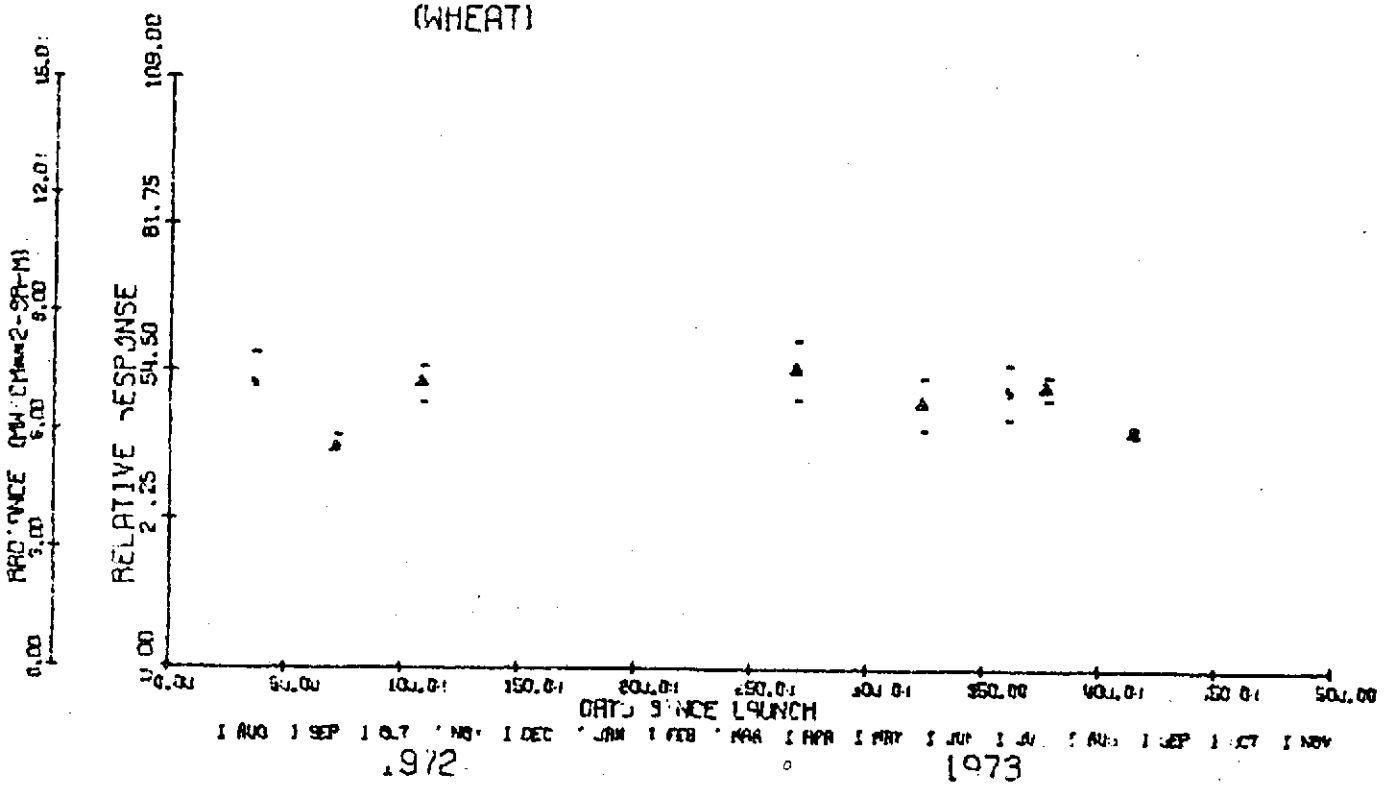
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
BROWNING, MT.
(WHEAT)



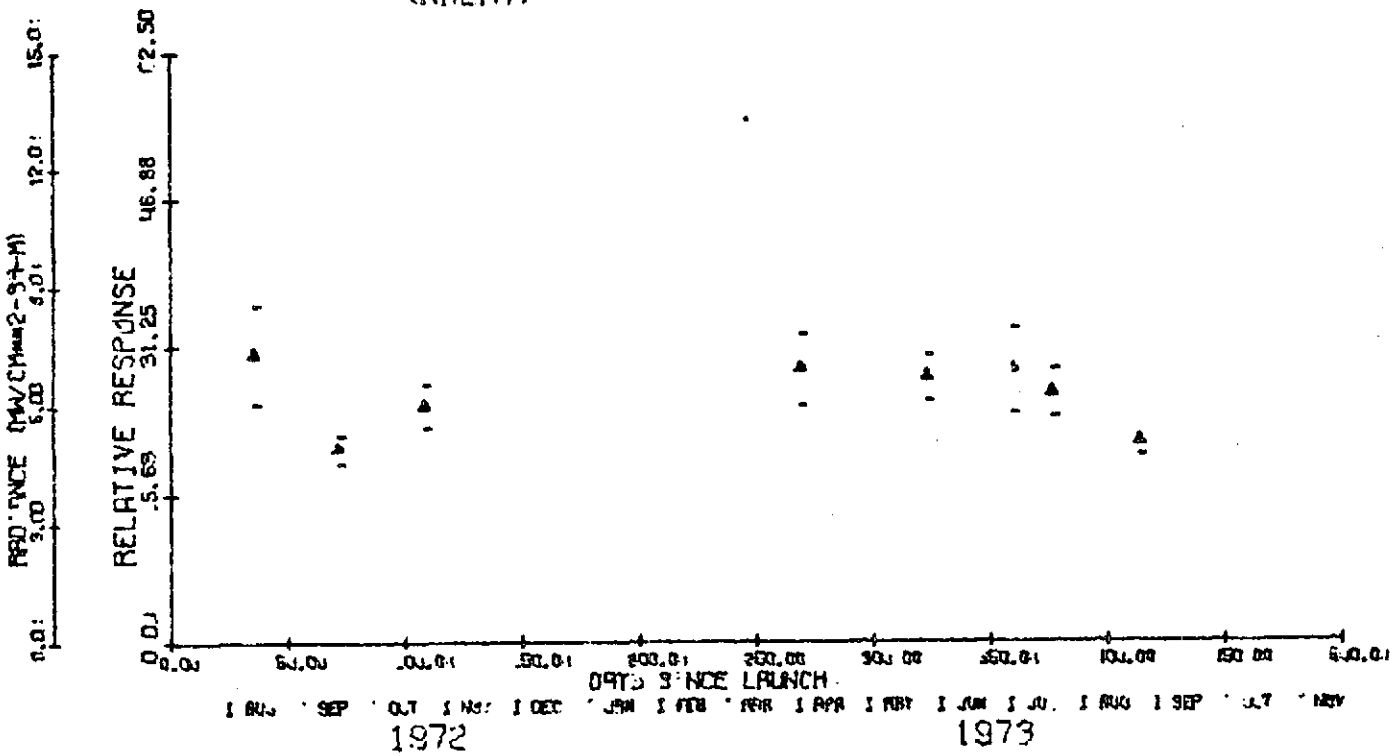
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
BROWNING, MT.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BROWNING, MT
(WHEAT)



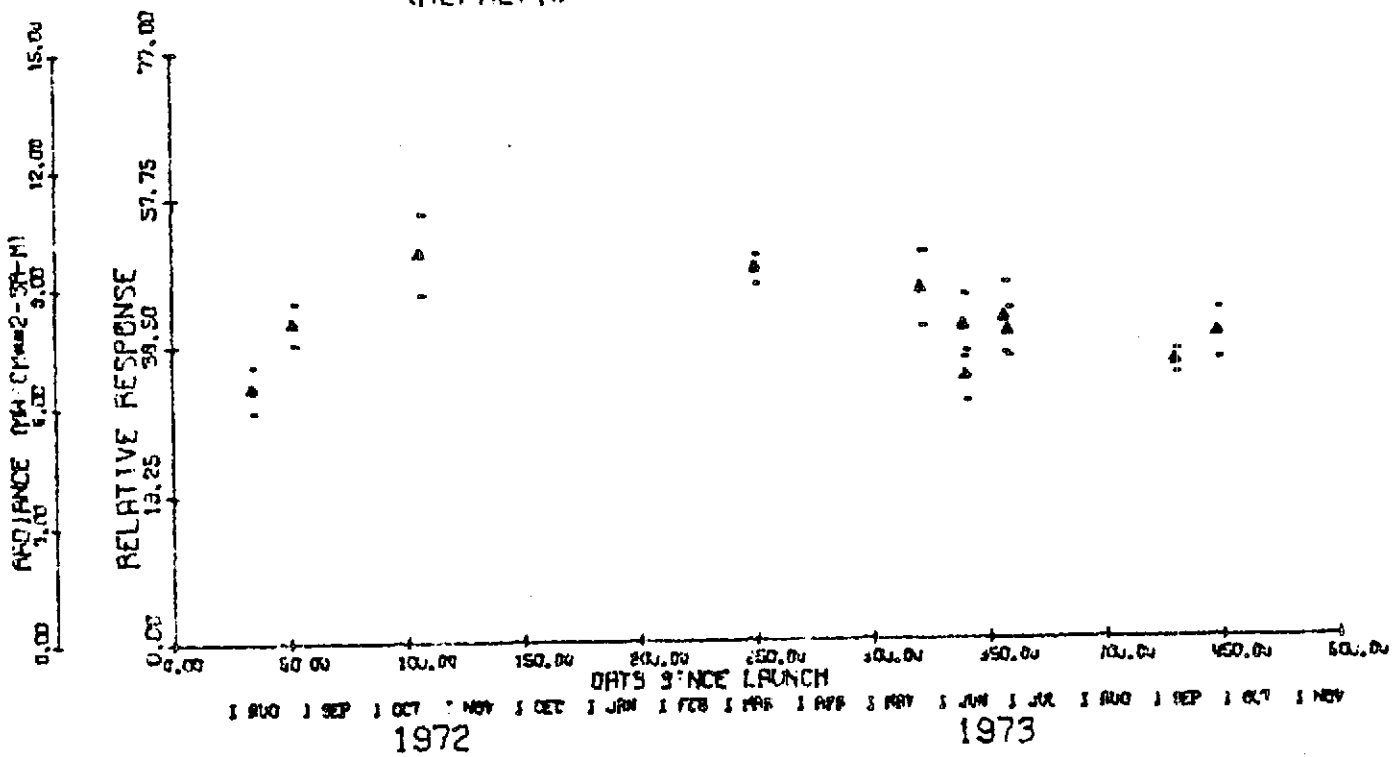
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
BROWNING, MT.
(WHEAT)



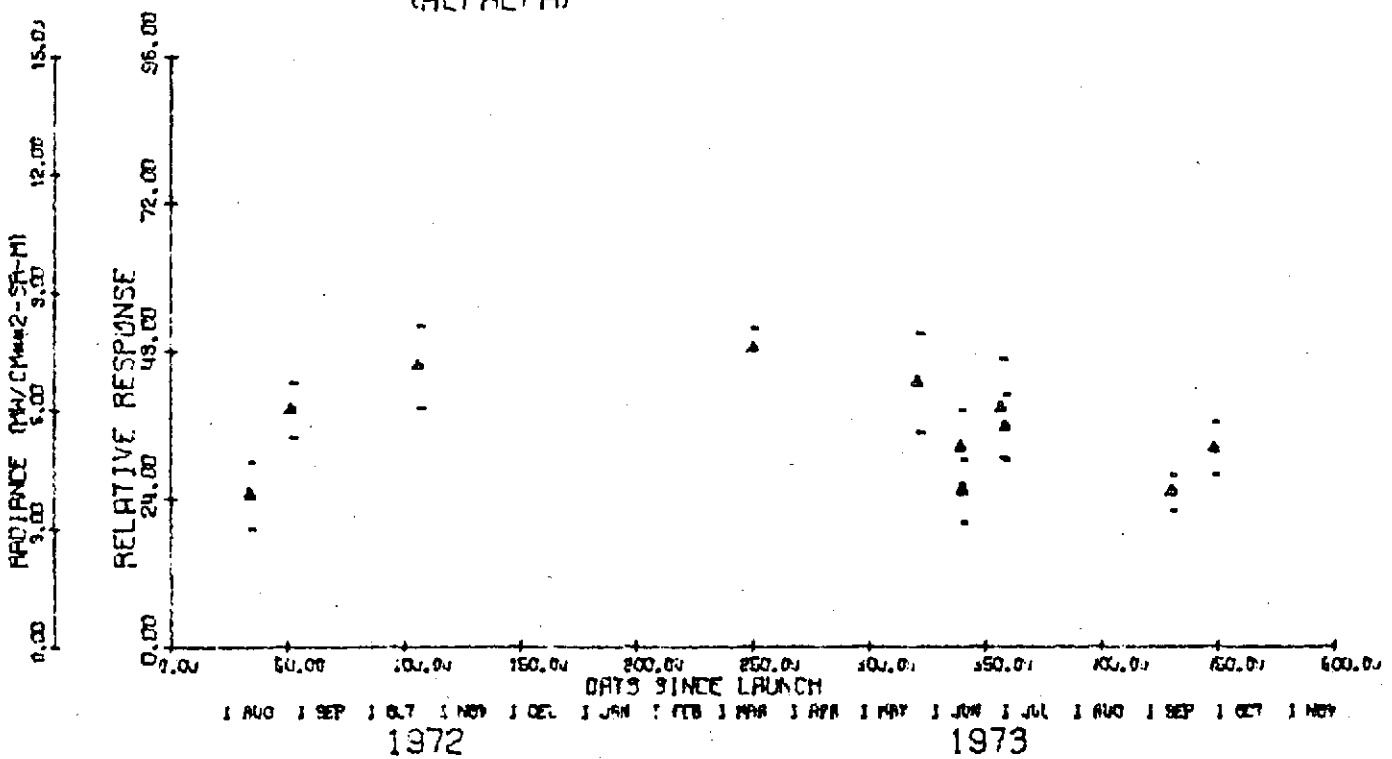
ROCKY MOUNTAIN CORRIDOR

Logan, MT
45°47'N, 111°27'W

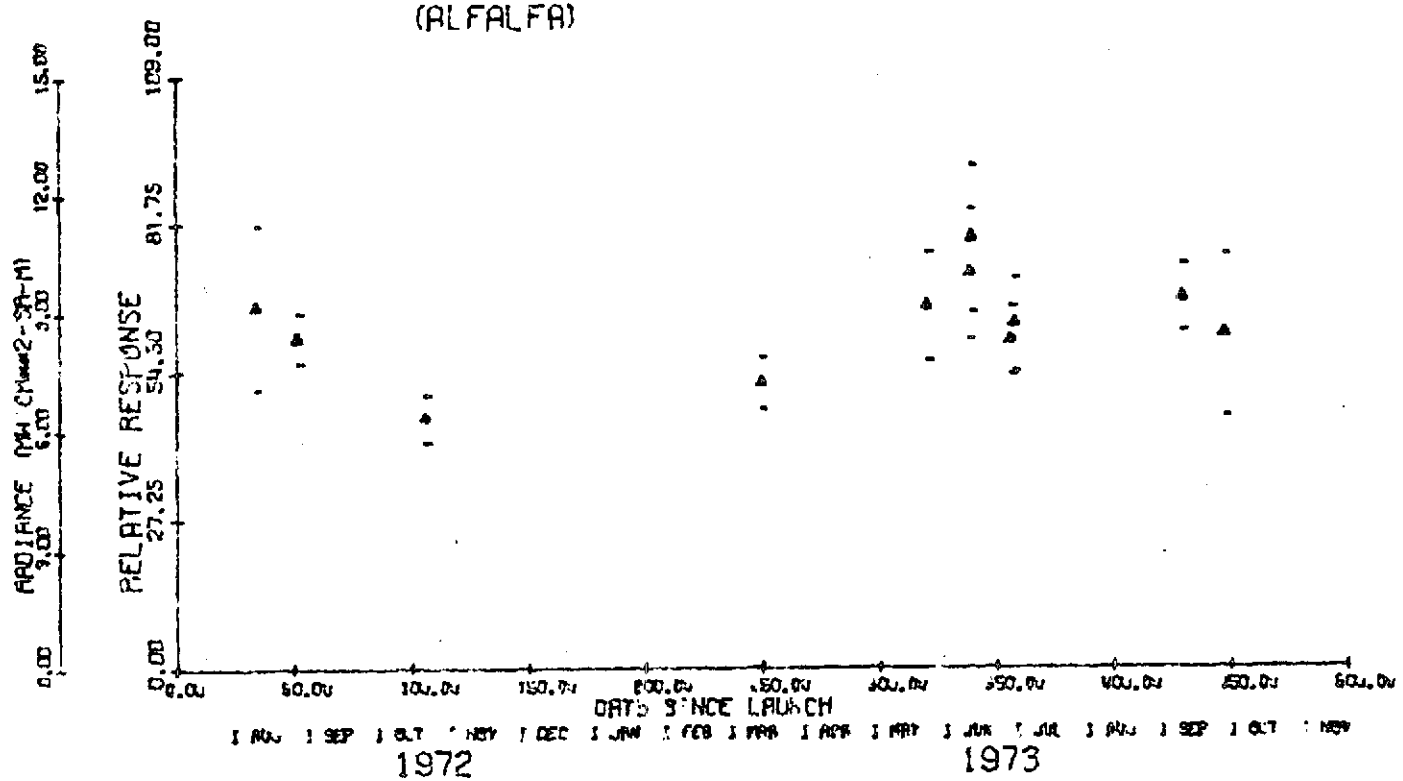
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
LOGAN, MT.
(ALFALFA)



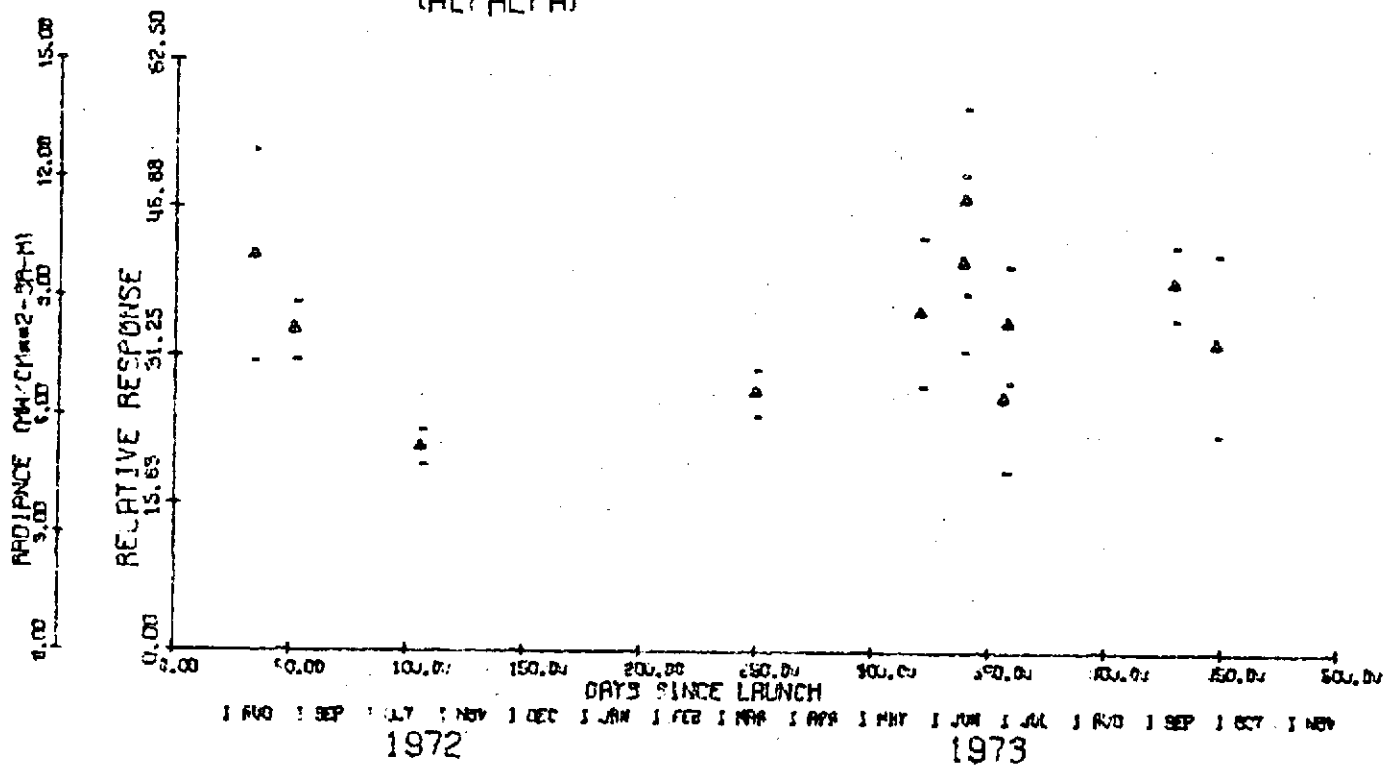
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.5-0.7 M
LOGAN, MT.
(ALFALFA)



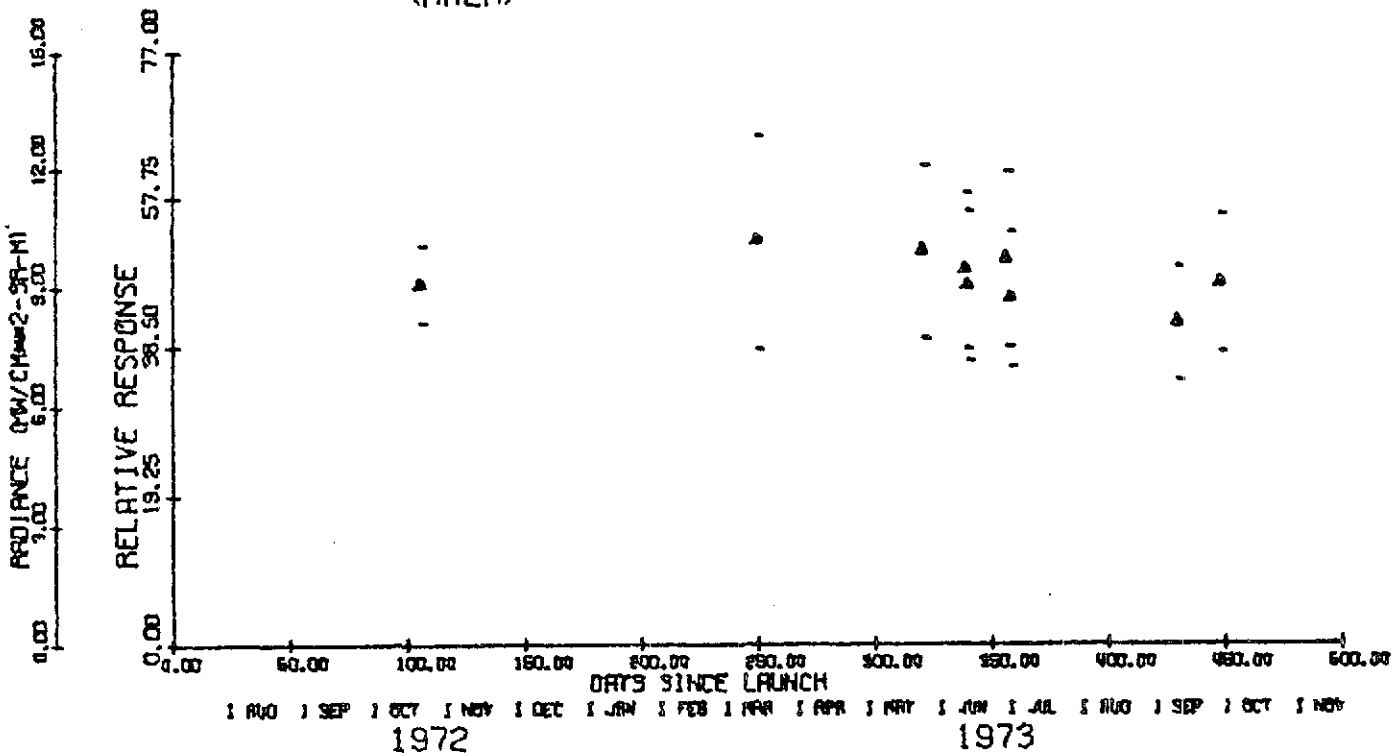
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
LOGAN, MT.
(ALFALFA)



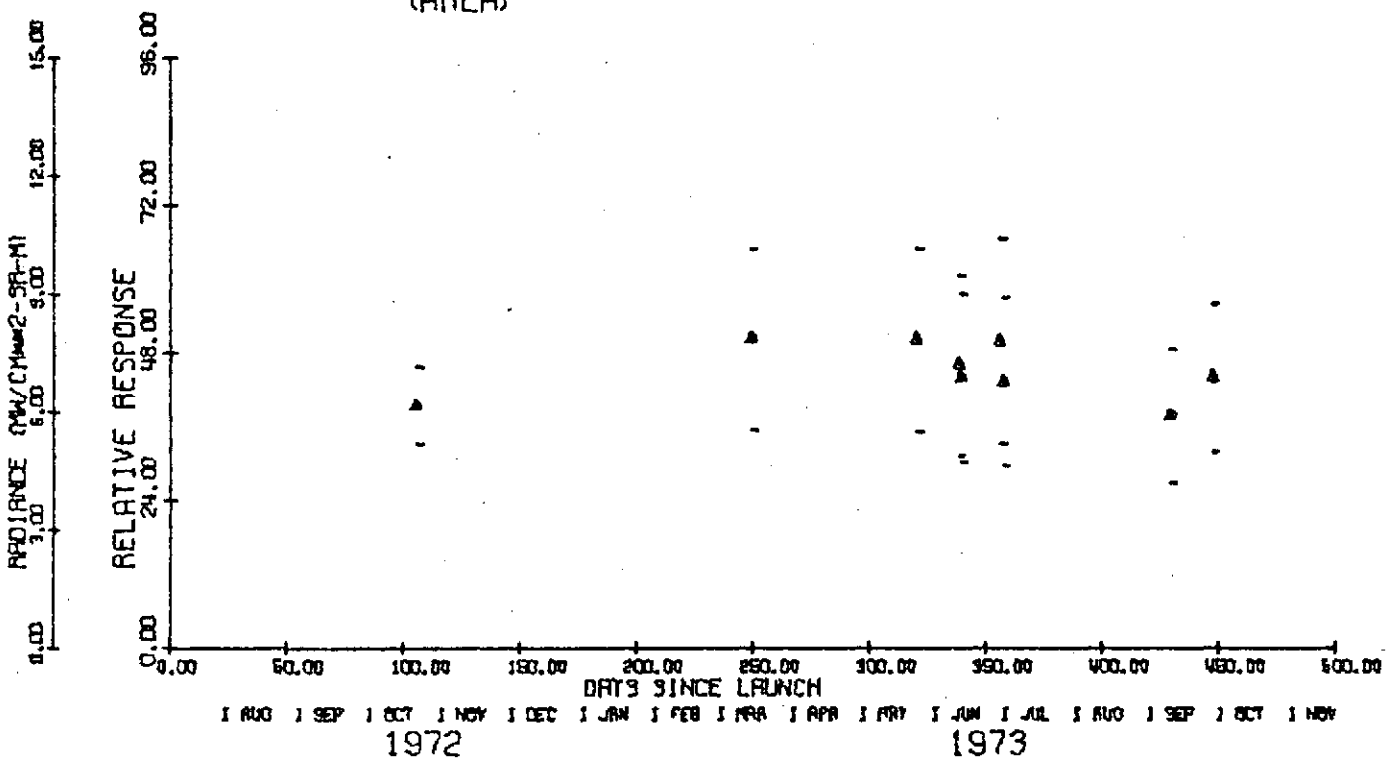
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
LOGAN, MT.
(ALFALFA)



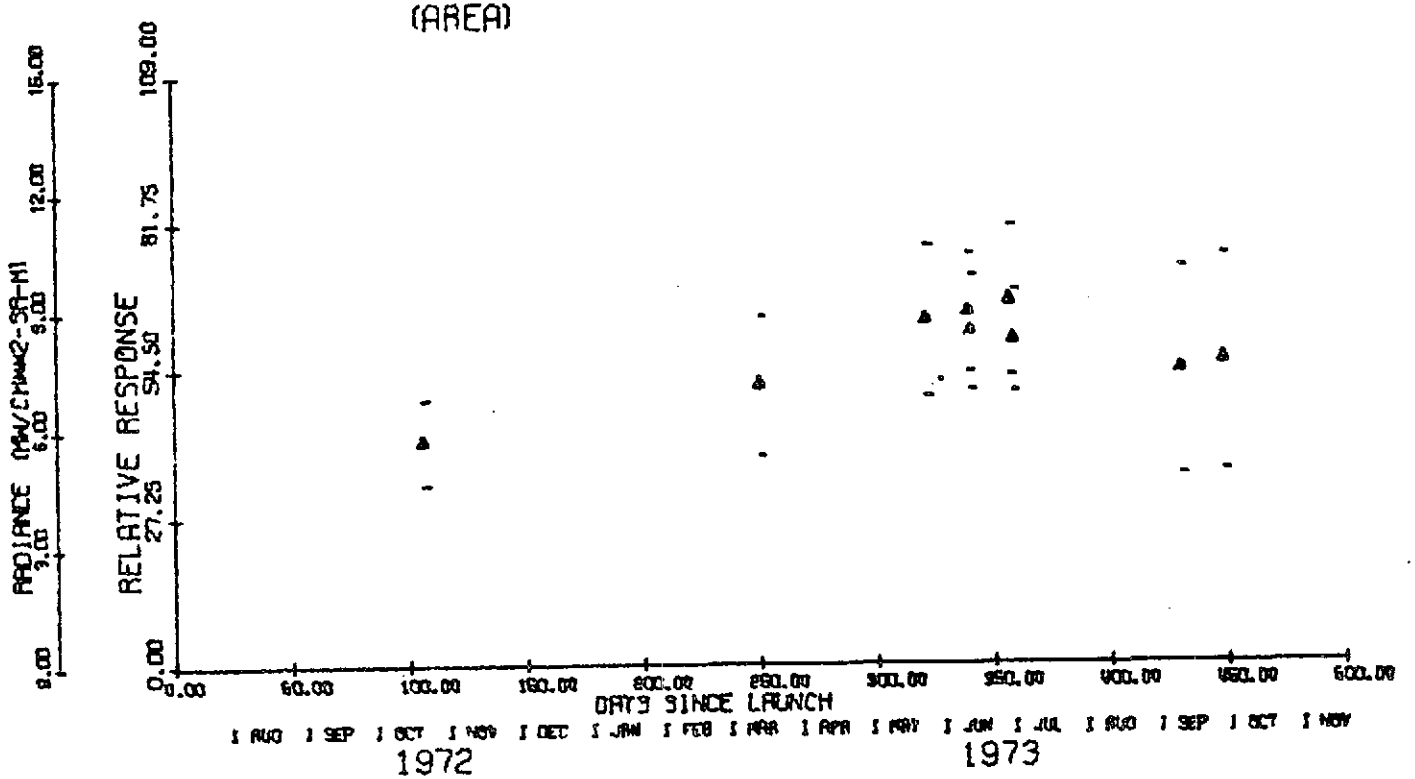
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
LOGAN, MT.
(AREA)



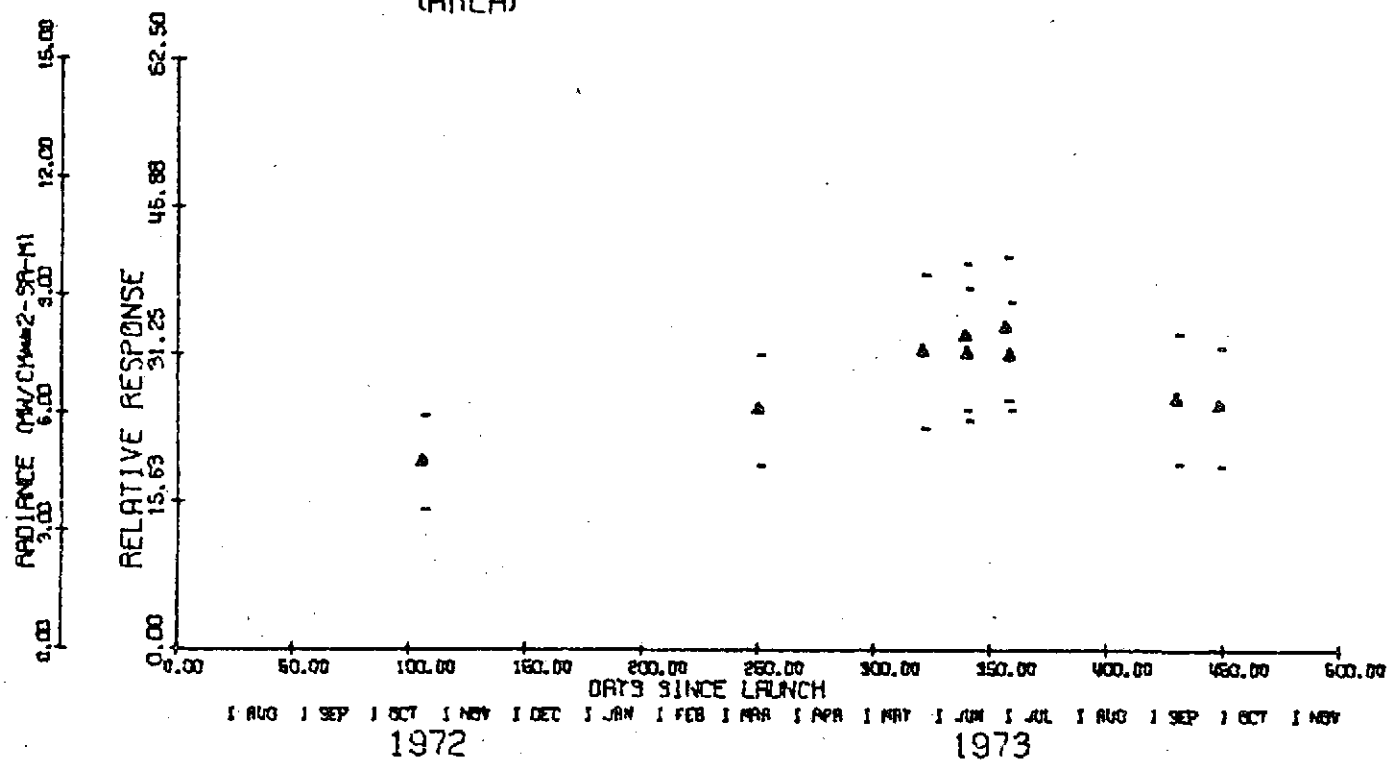
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
LOGAN, MT.
(AREA)



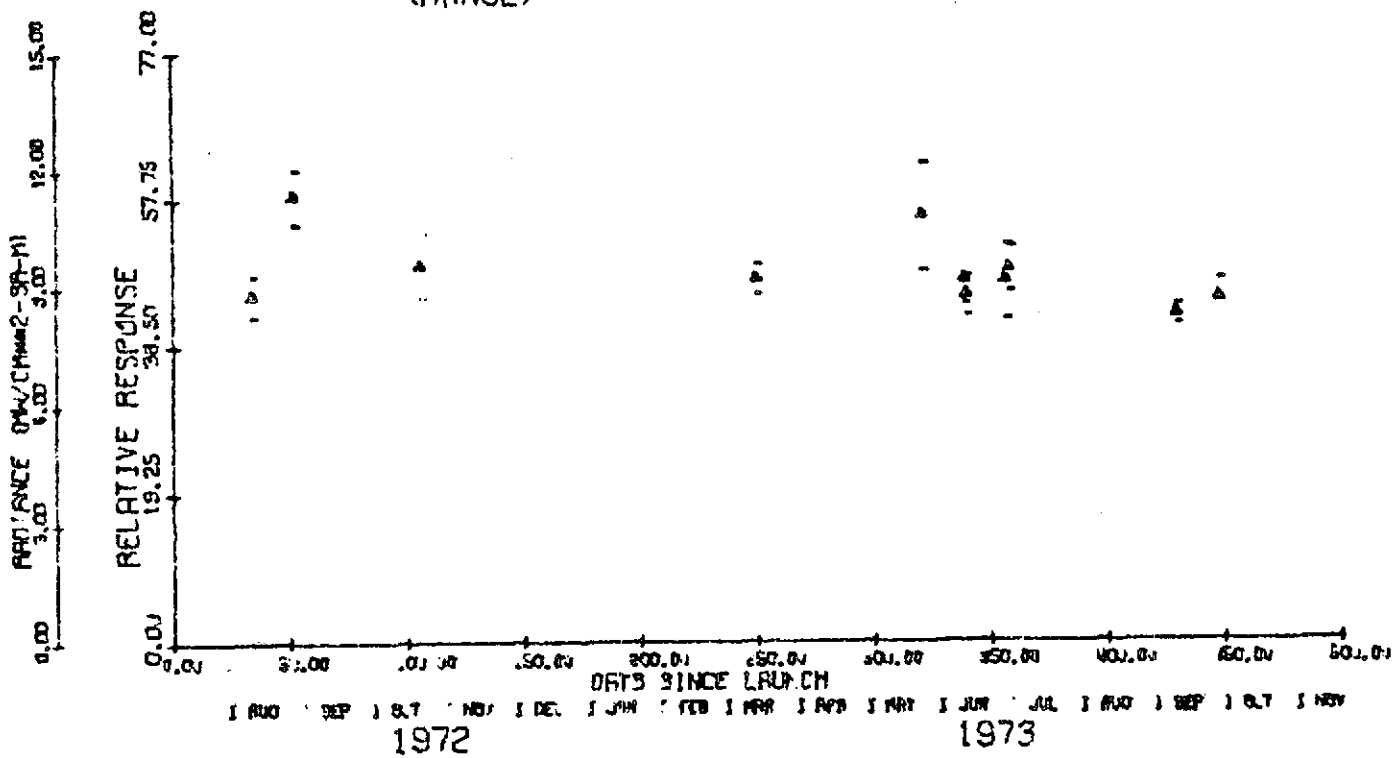
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
LOGAN, MT.
(AREA)



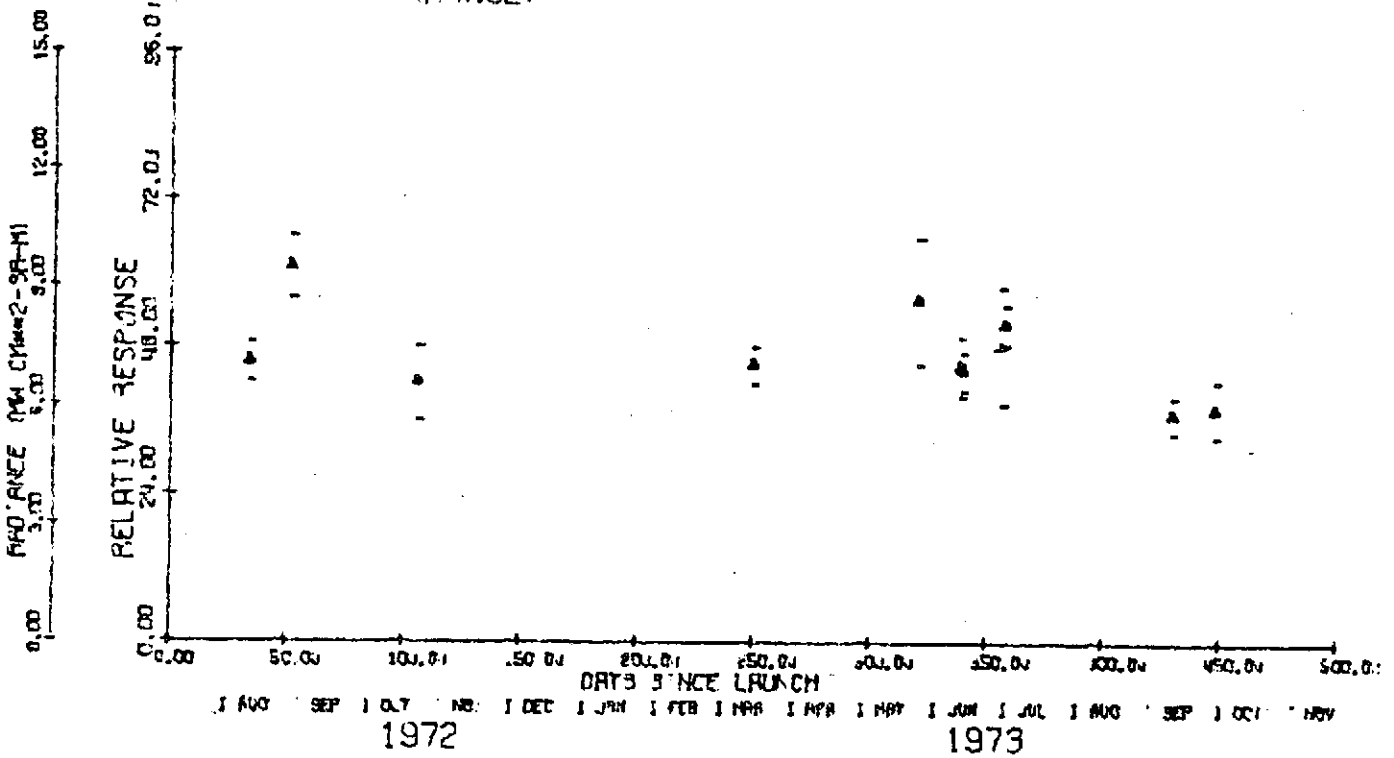
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BAND 7 0.8-1.1 M
LOGAN, MT.
(AREA)



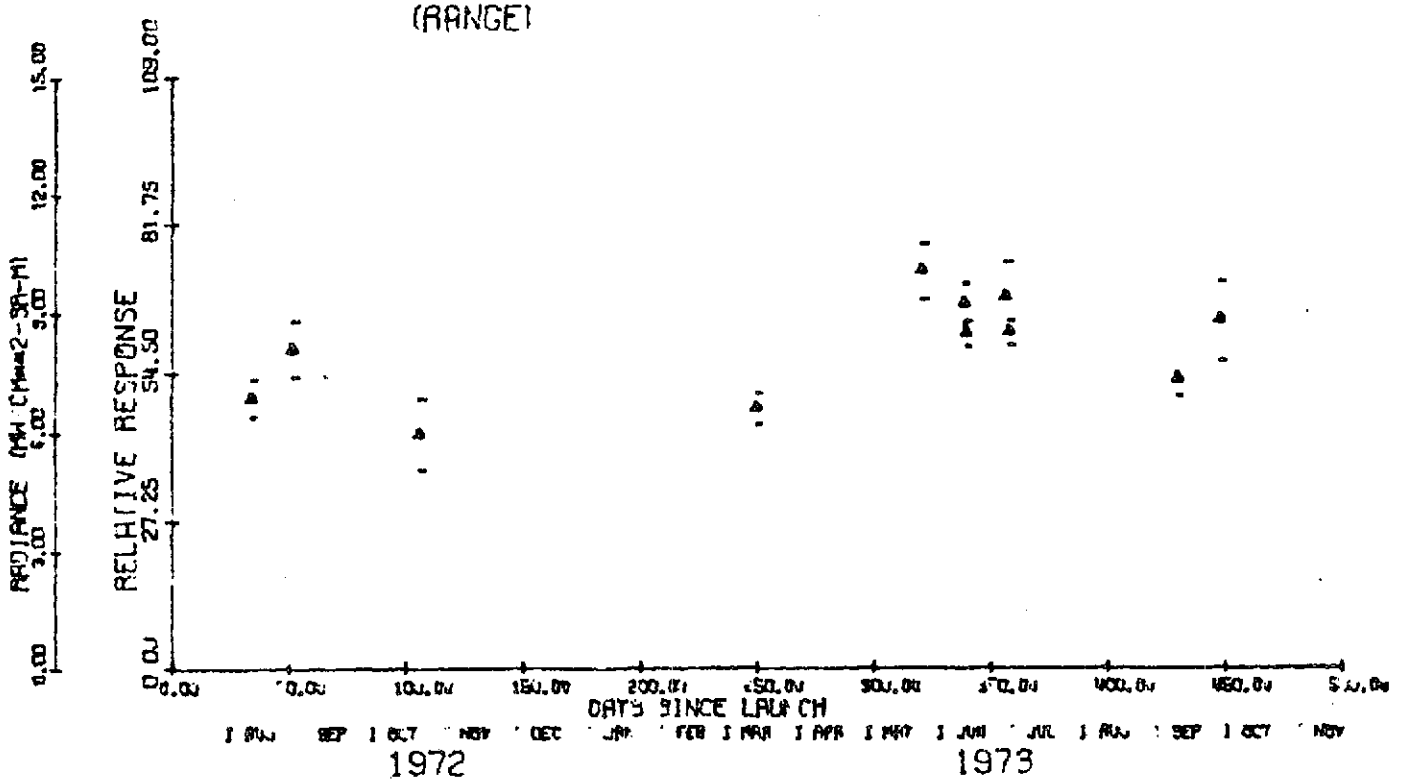
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BAND 4 0.5-0.6 M
LOGAN MT
(RANGE)



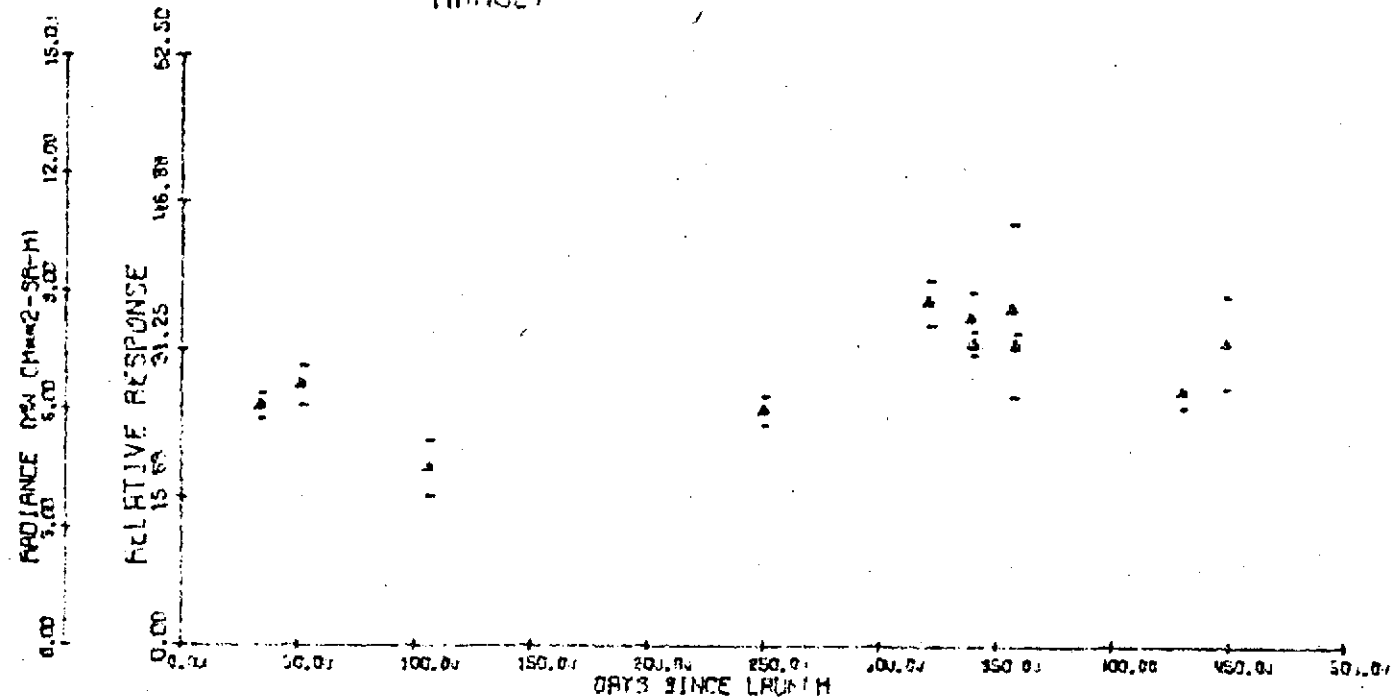
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BAND 5 0.6-0.7 M
LOGAN, MT.
(RANGE)



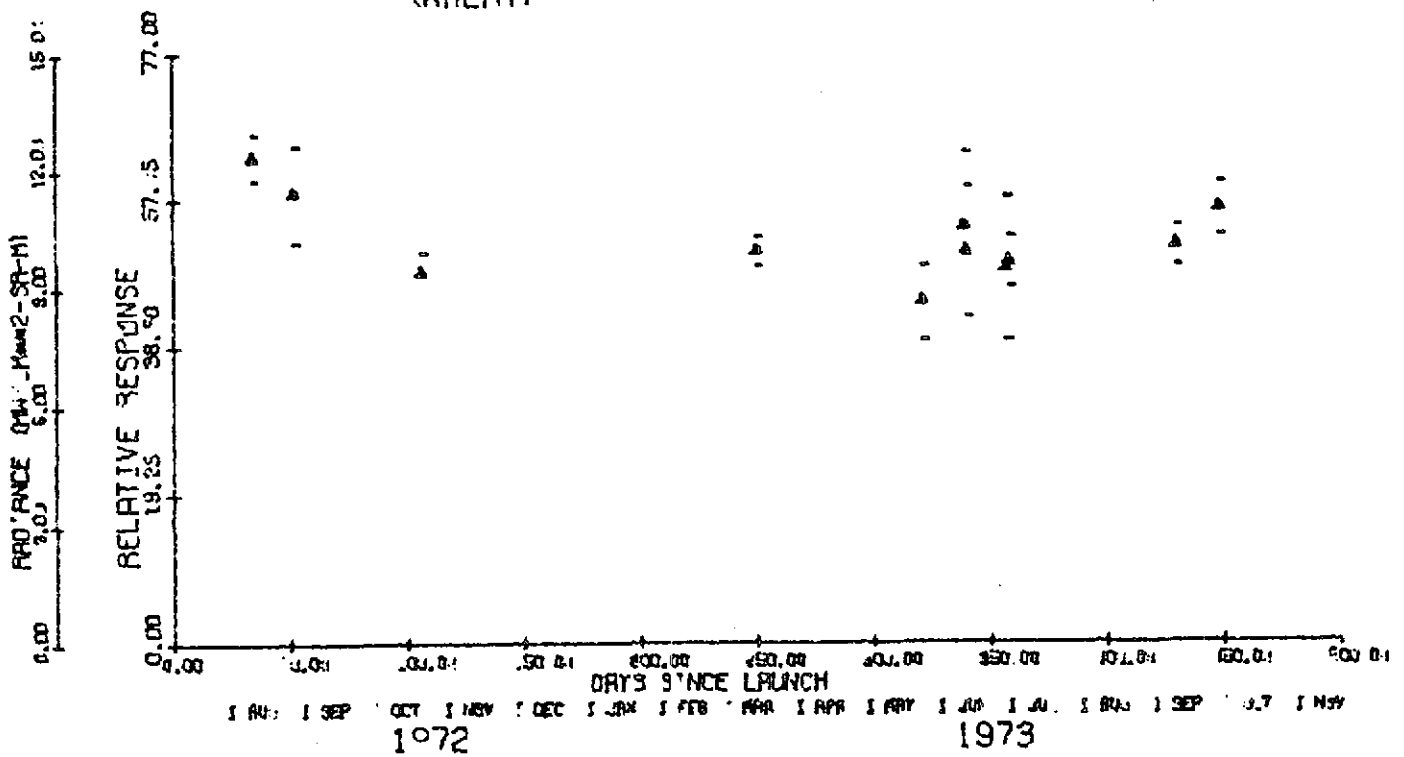
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BAND 6 0.7-0.8 M
LOGAN, MT
(RANGE)



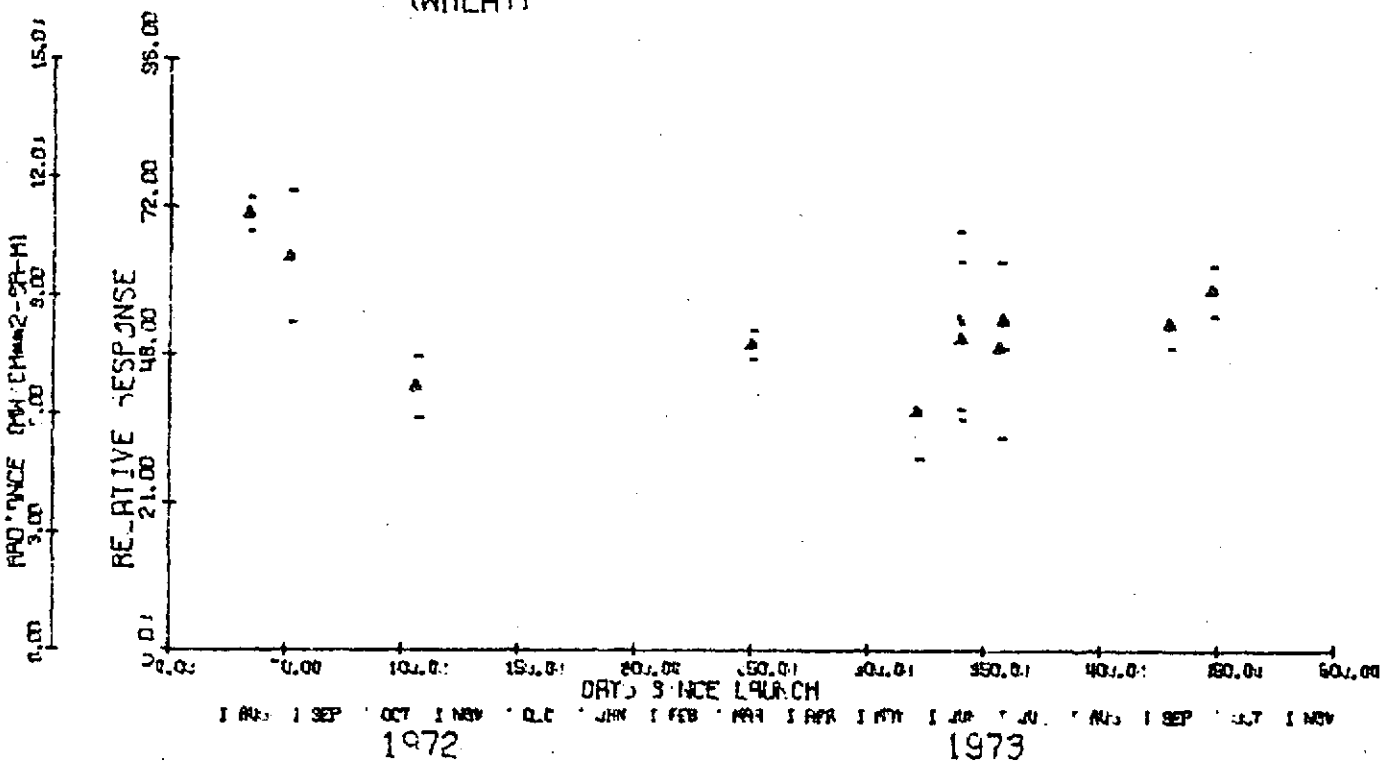
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BAND 7 0.8-1.1 M
LOGAN MT
(RANGE)



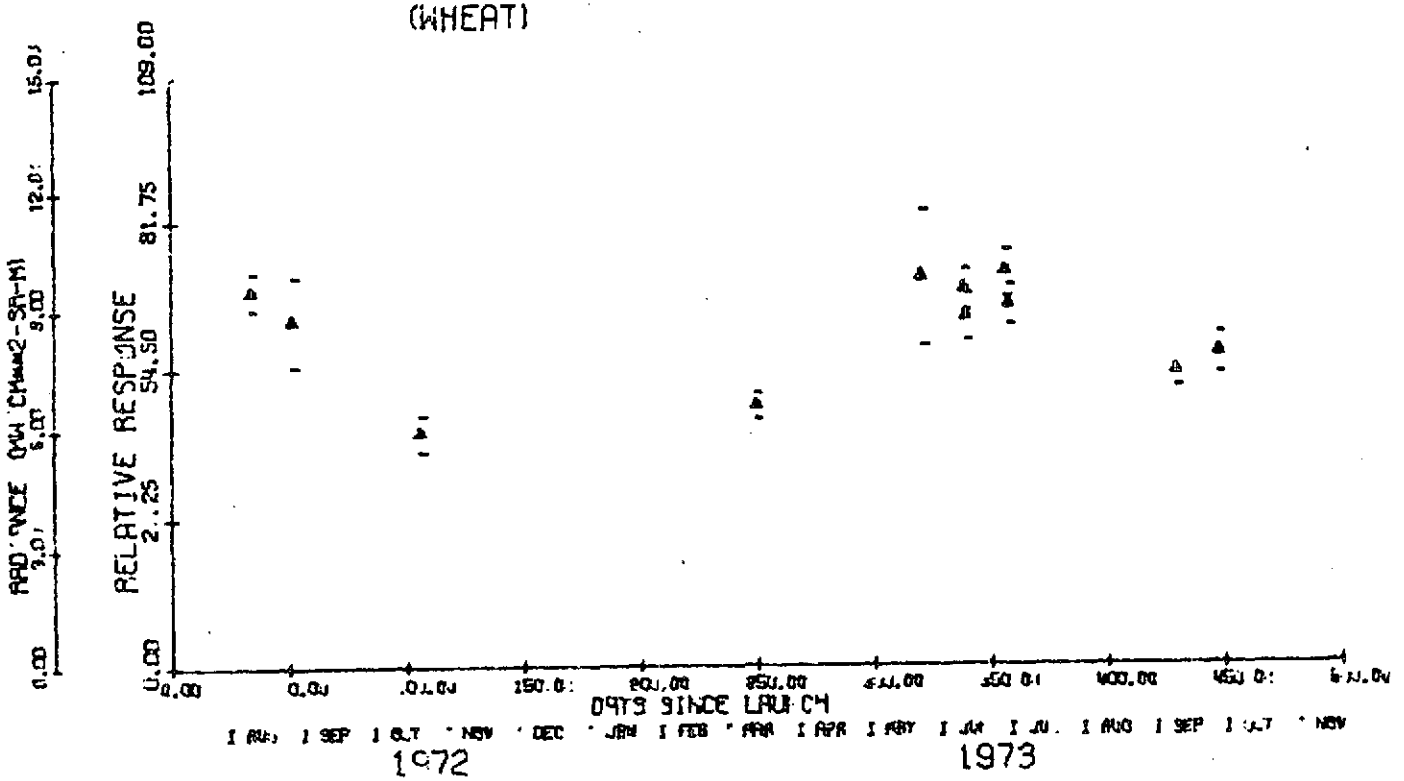
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LOGAN, MT.
(WHEAT)



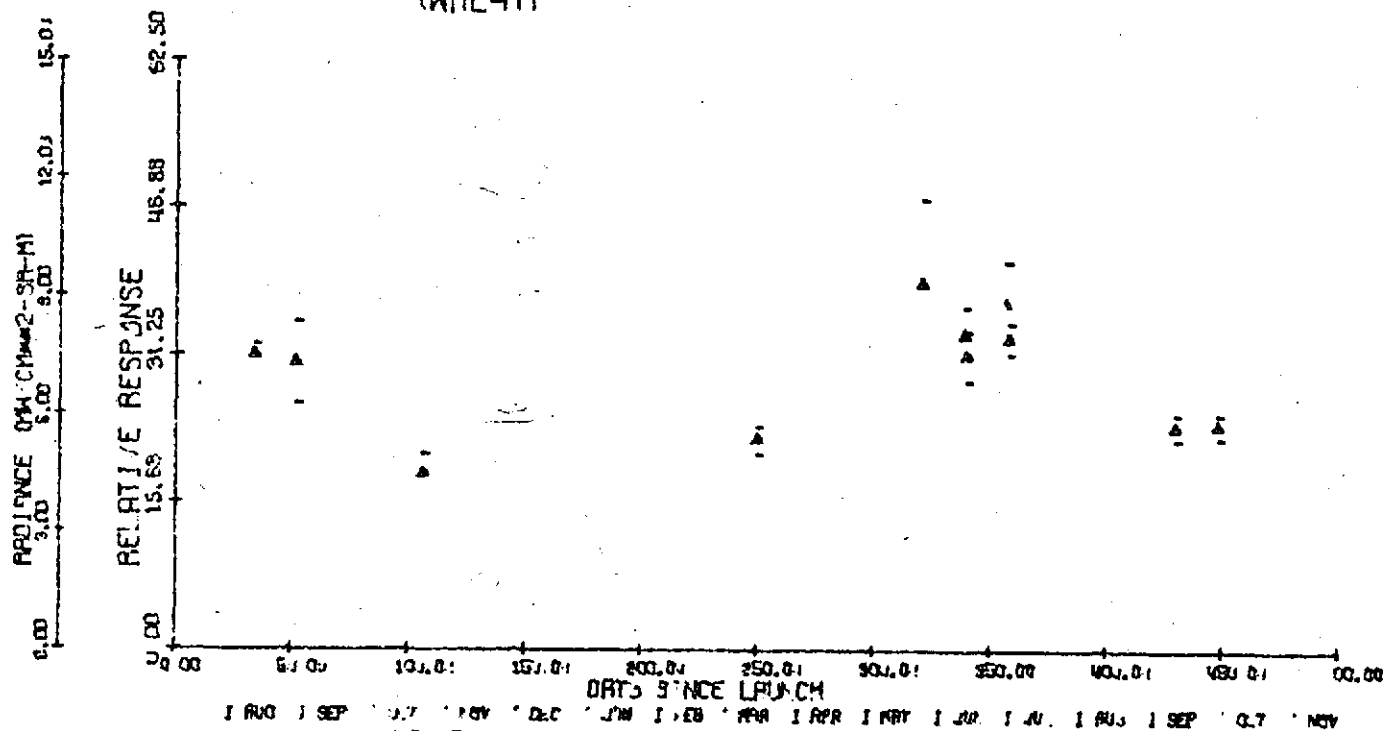
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RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
LOGAN, MT.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
LOGAN, MT.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
LOGAN, MT
(WHEAT)



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ROCKY MOUNTAIN CORRIDOR

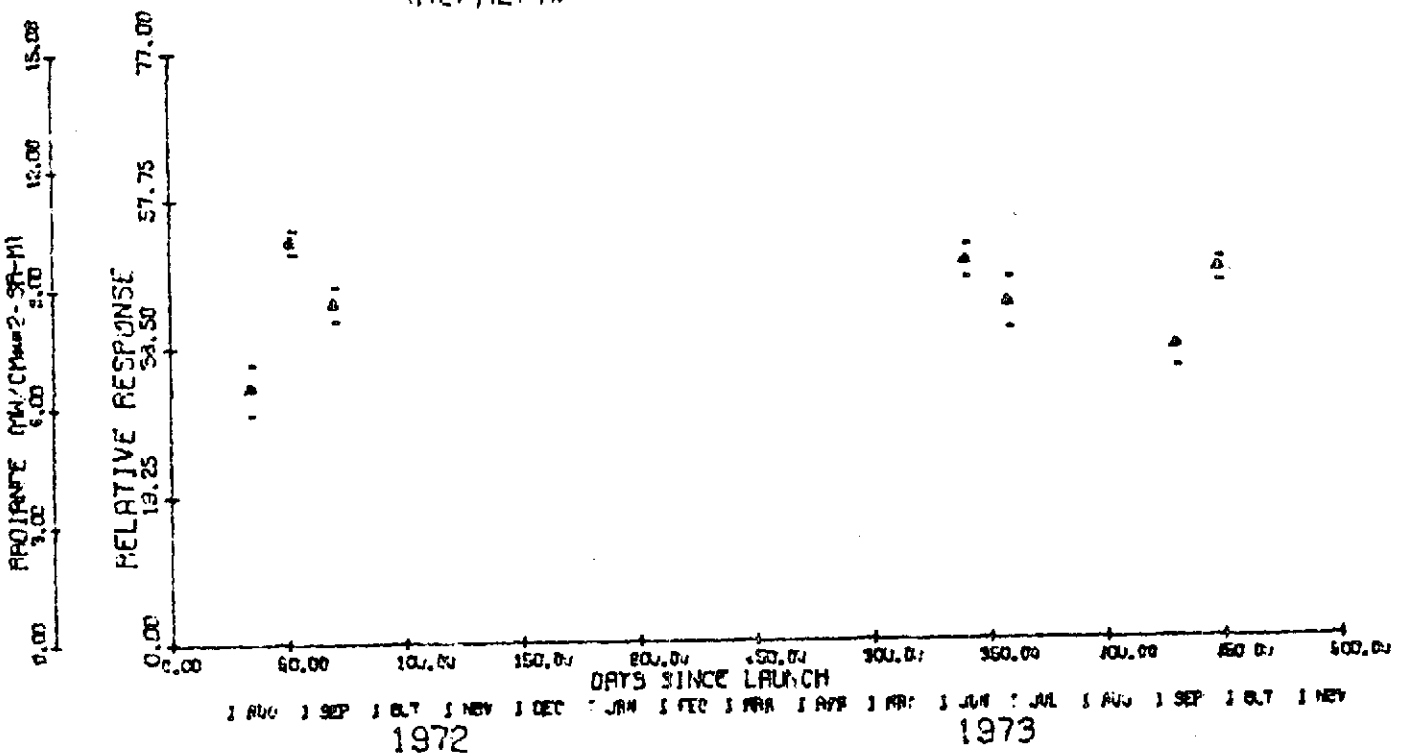
Camas, ID

43°58'N, 112°18'W

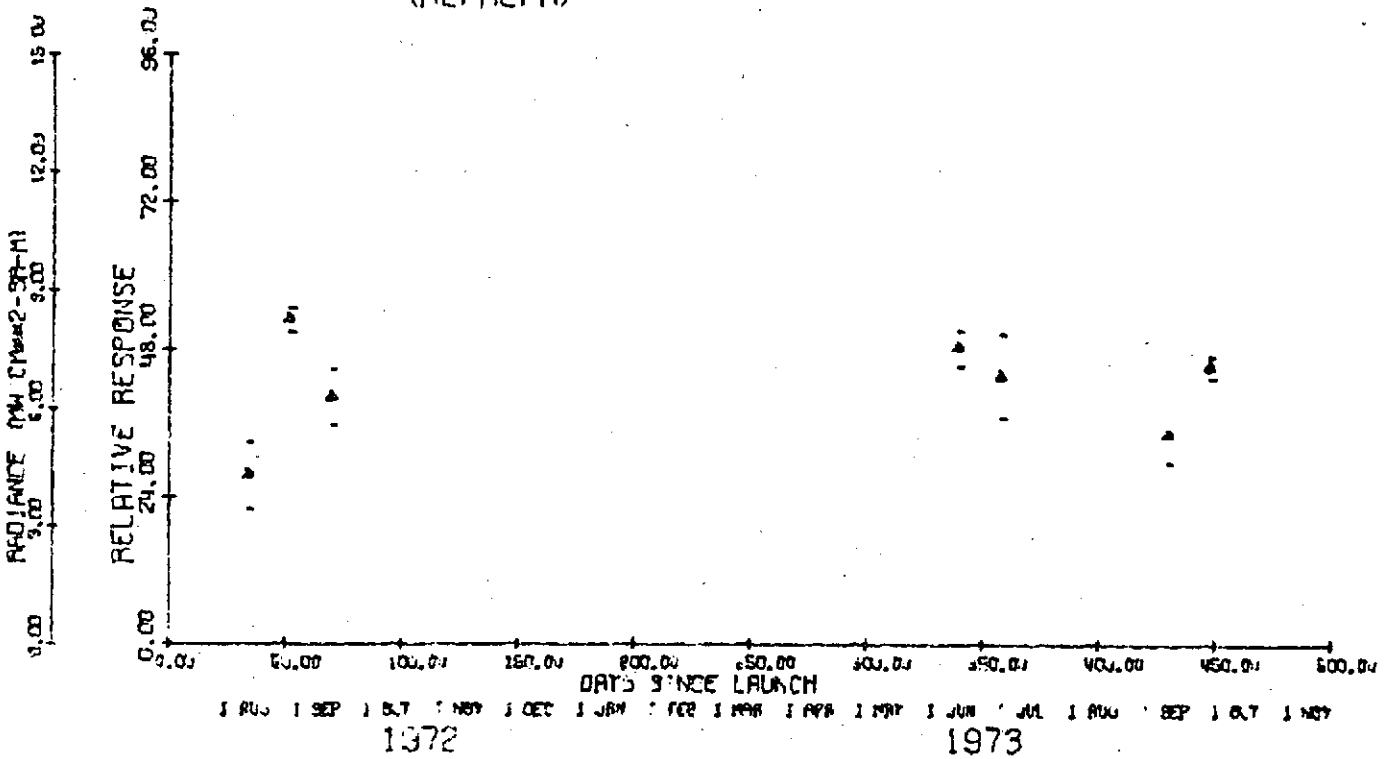


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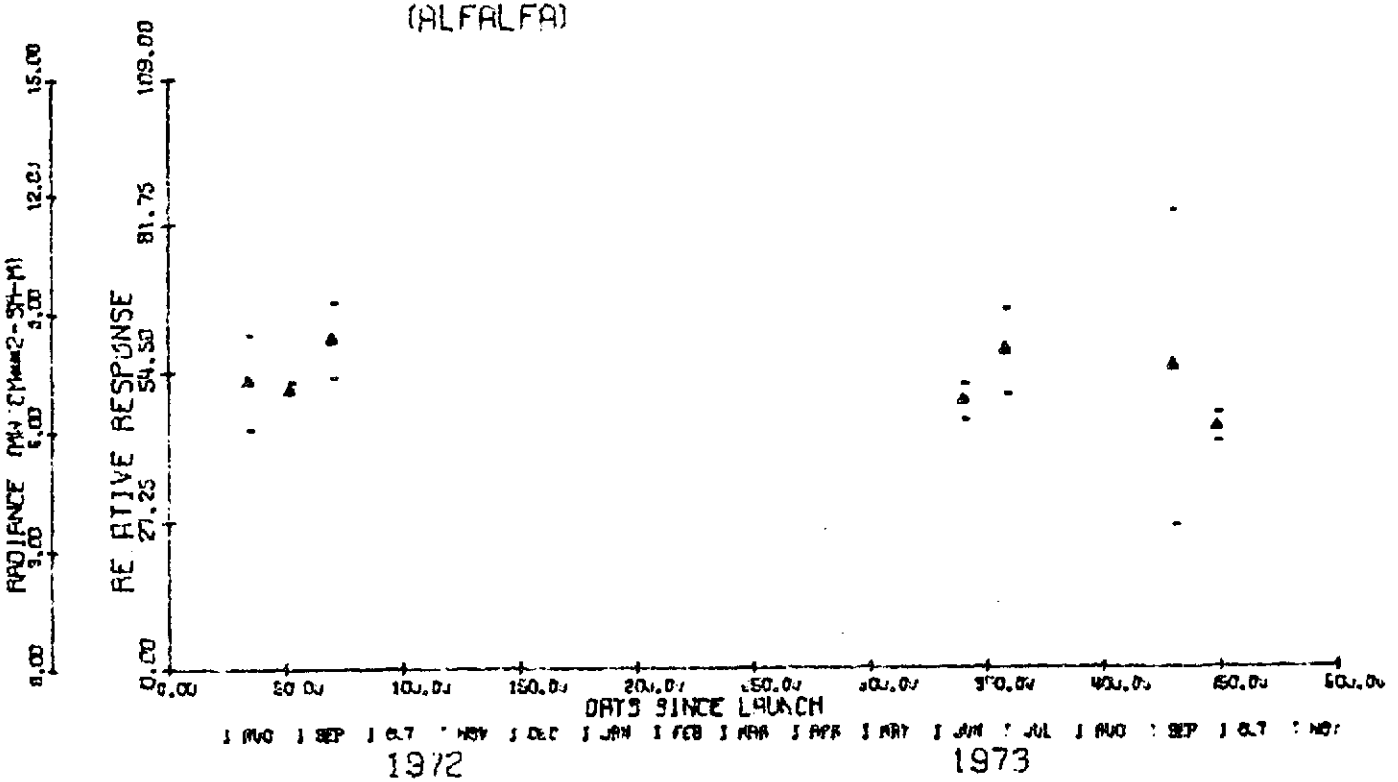
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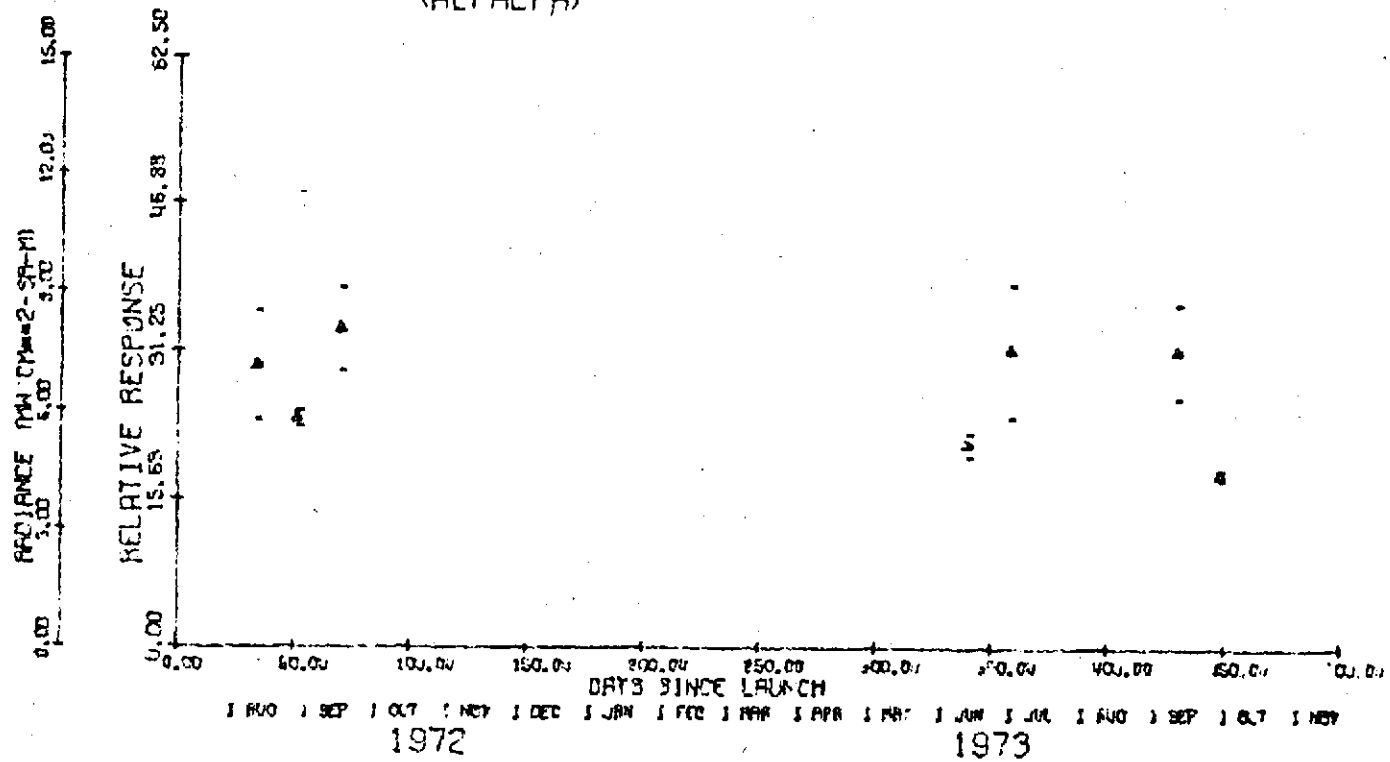
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(ALFALFA)



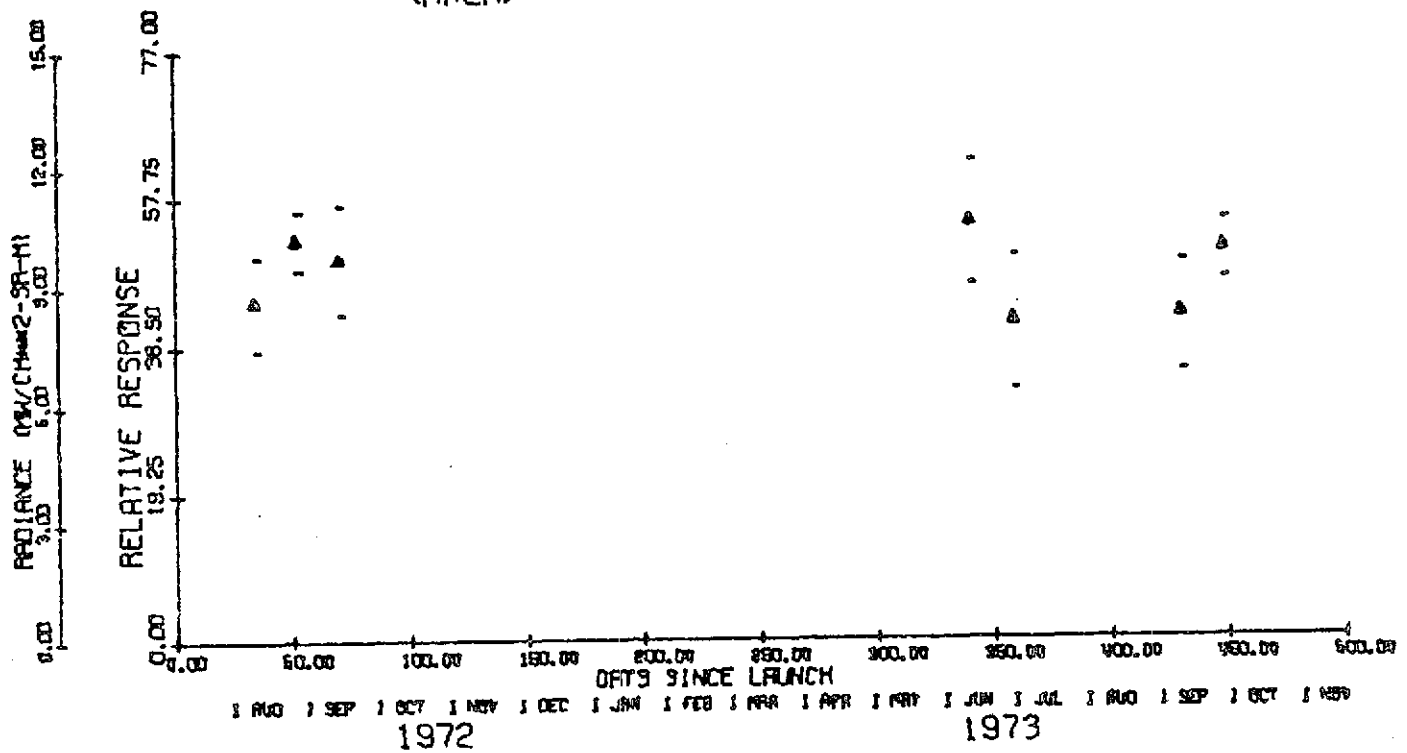
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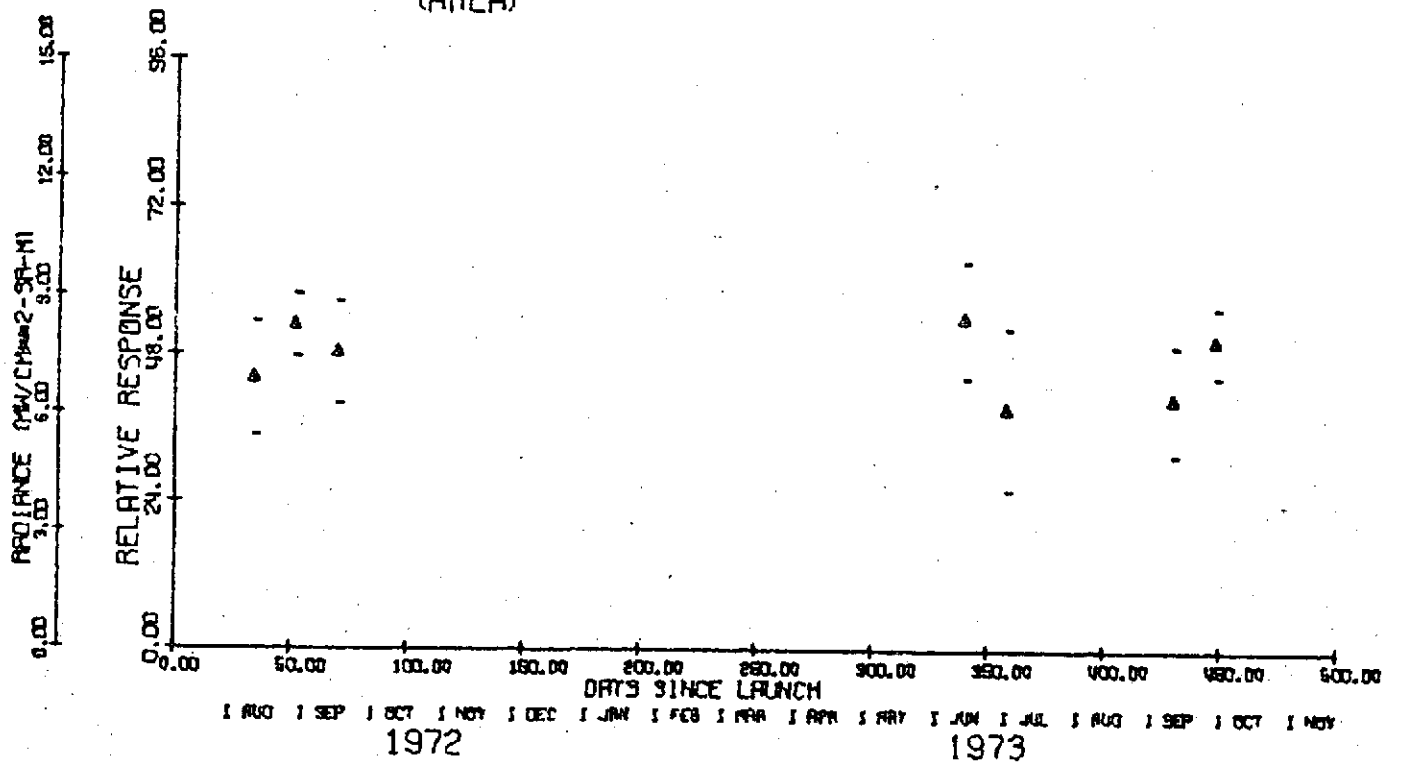
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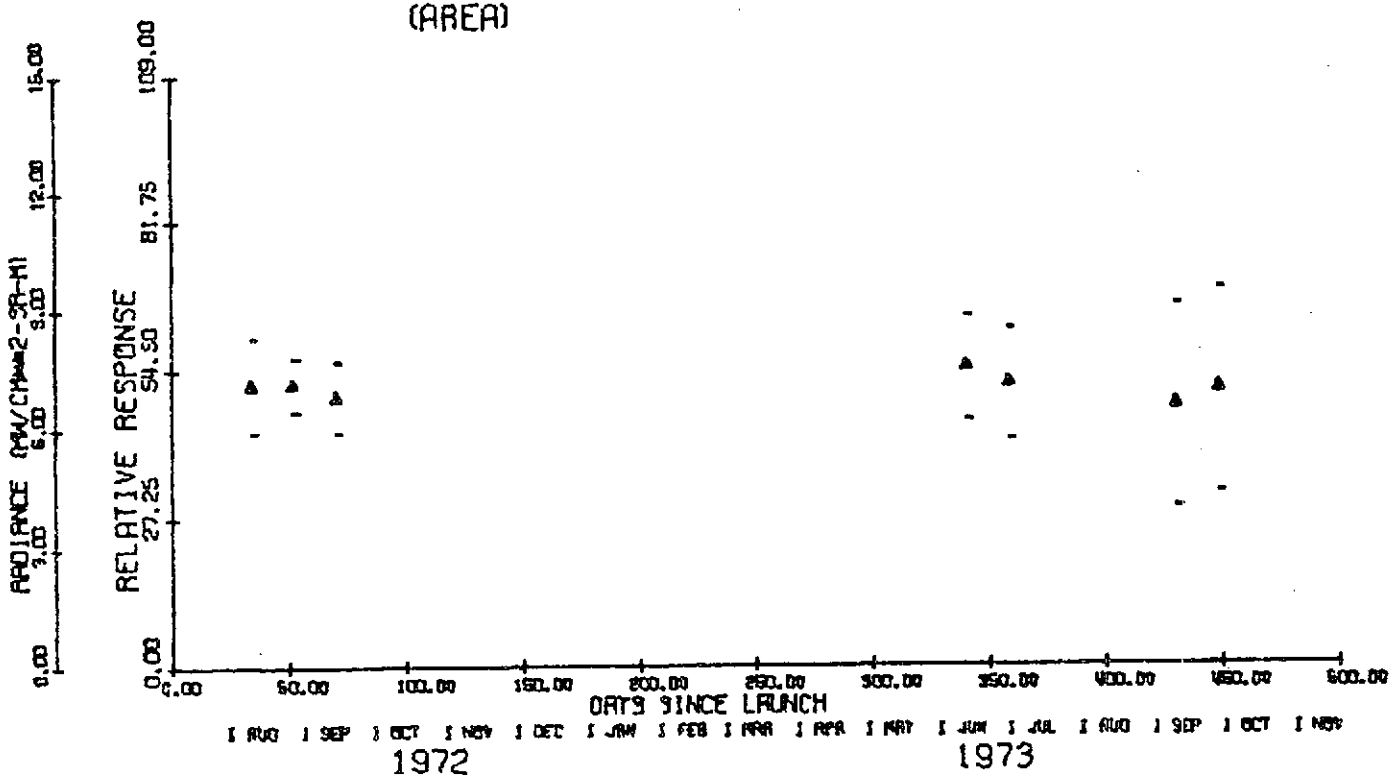
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(AREA)



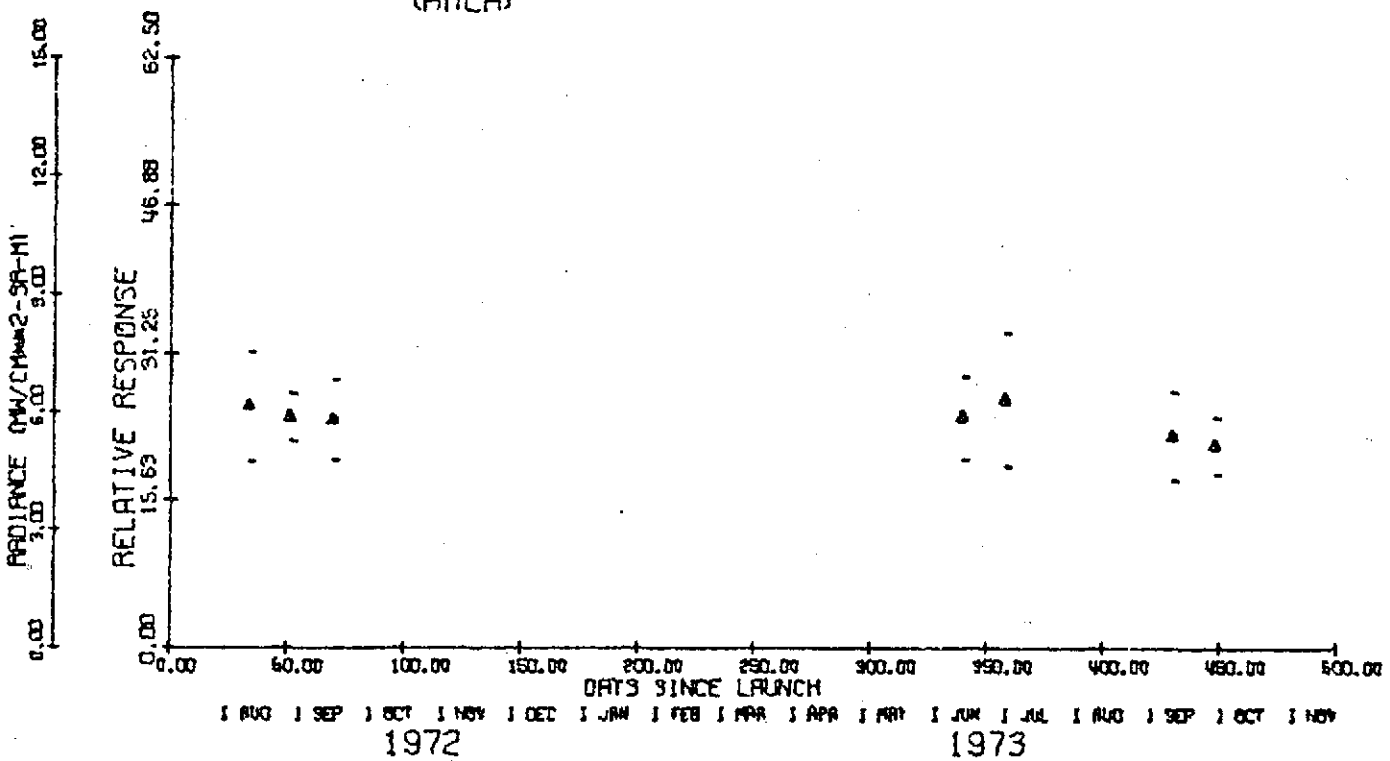
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RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
CAMAS, ID.
(AREA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
CAMAS, ID.
(AREA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
CAMAS, ID.
(AREA)



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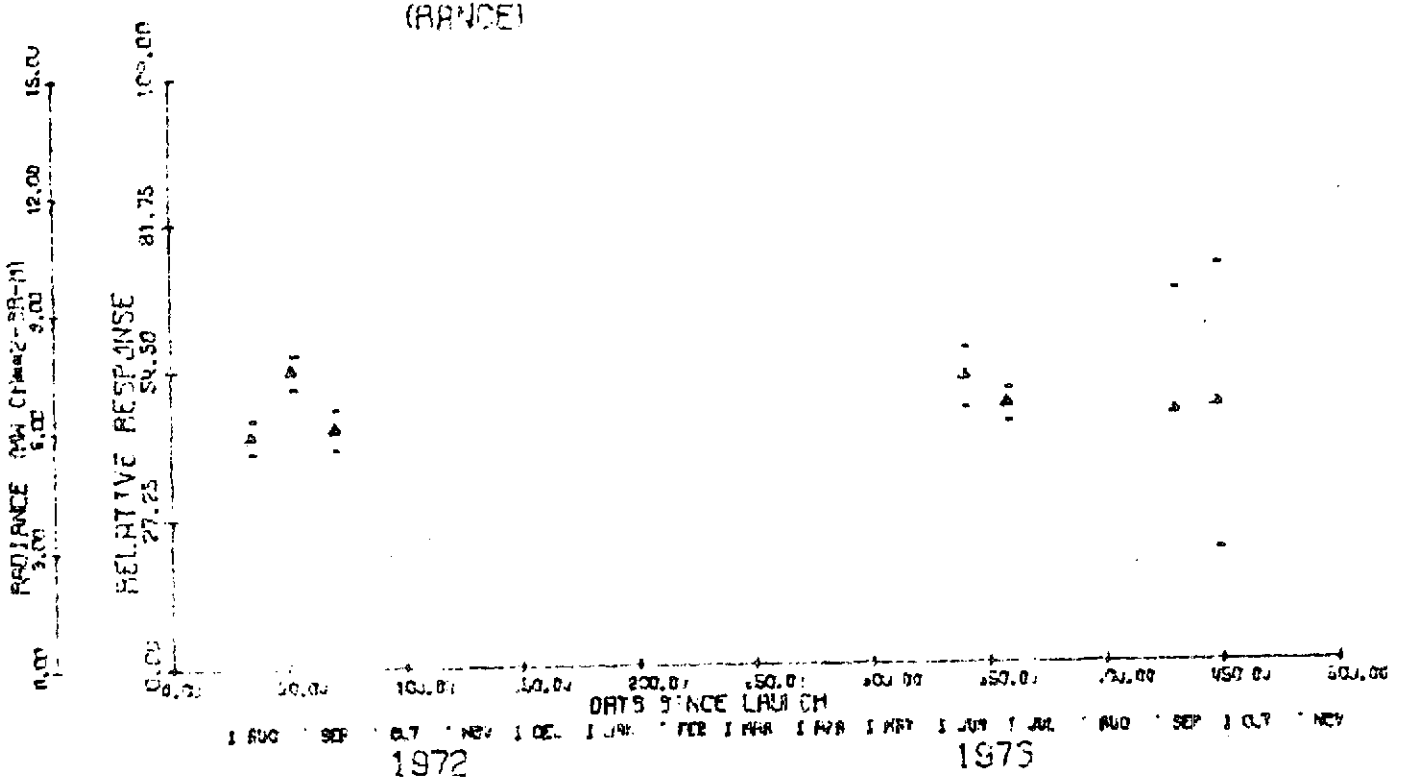
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
CAMS.ID.
(RANGE)

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ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
CAMAS, ID.
(RANGE)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
CAMAS, ID.
(RANGE)

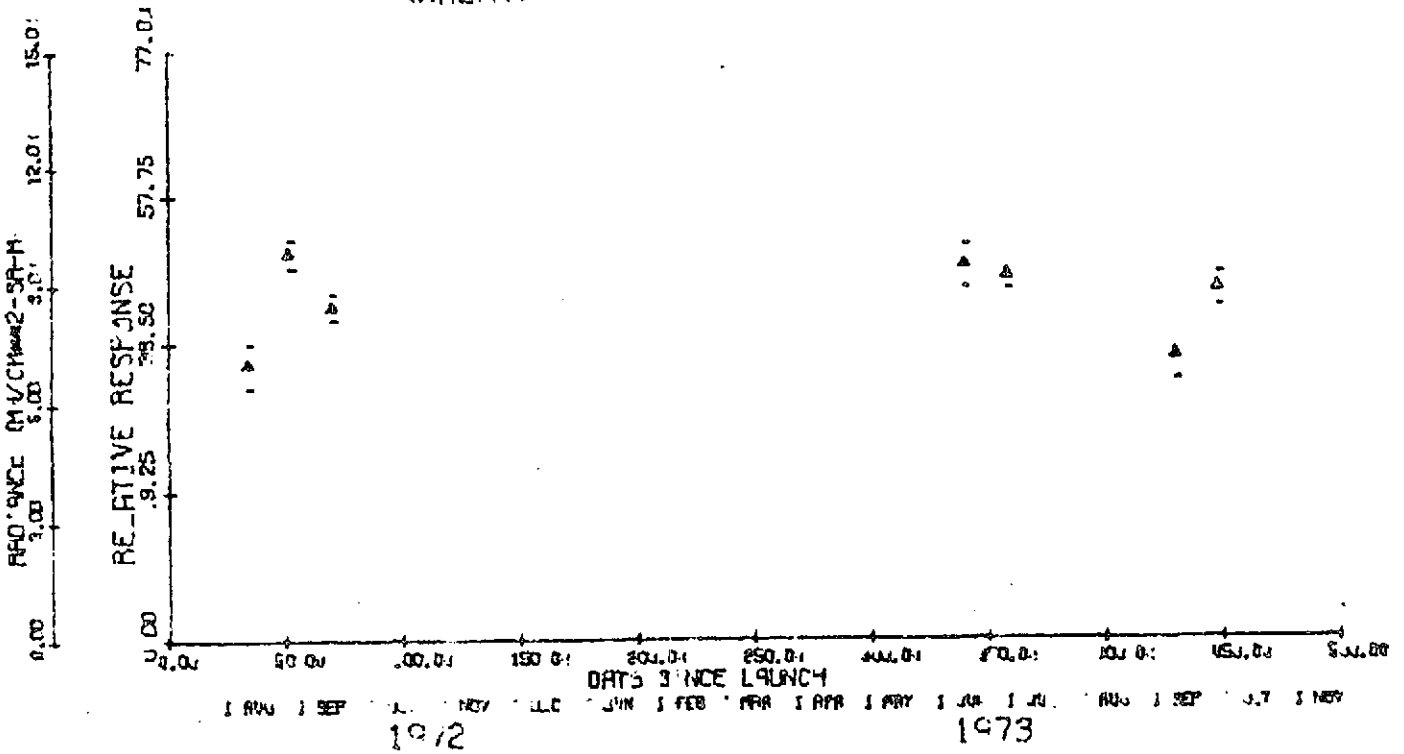


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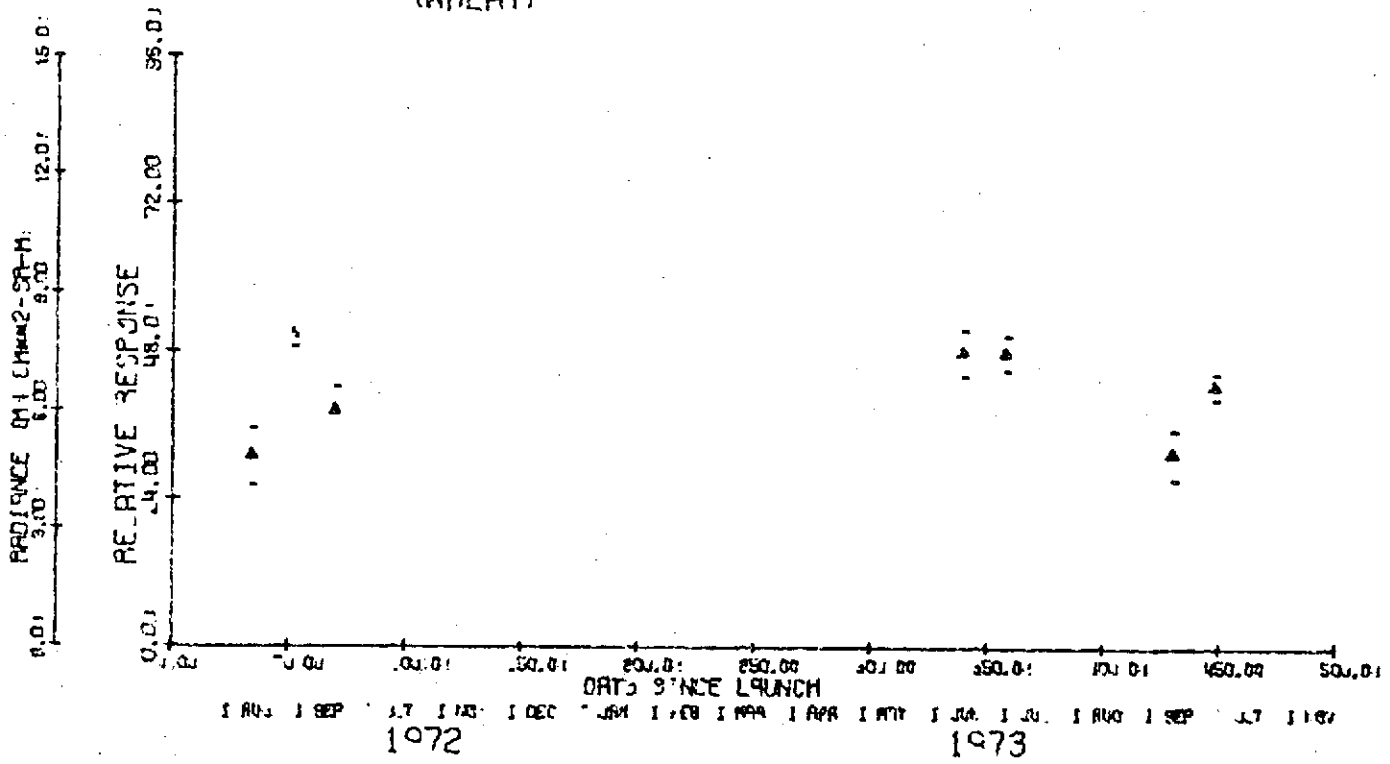


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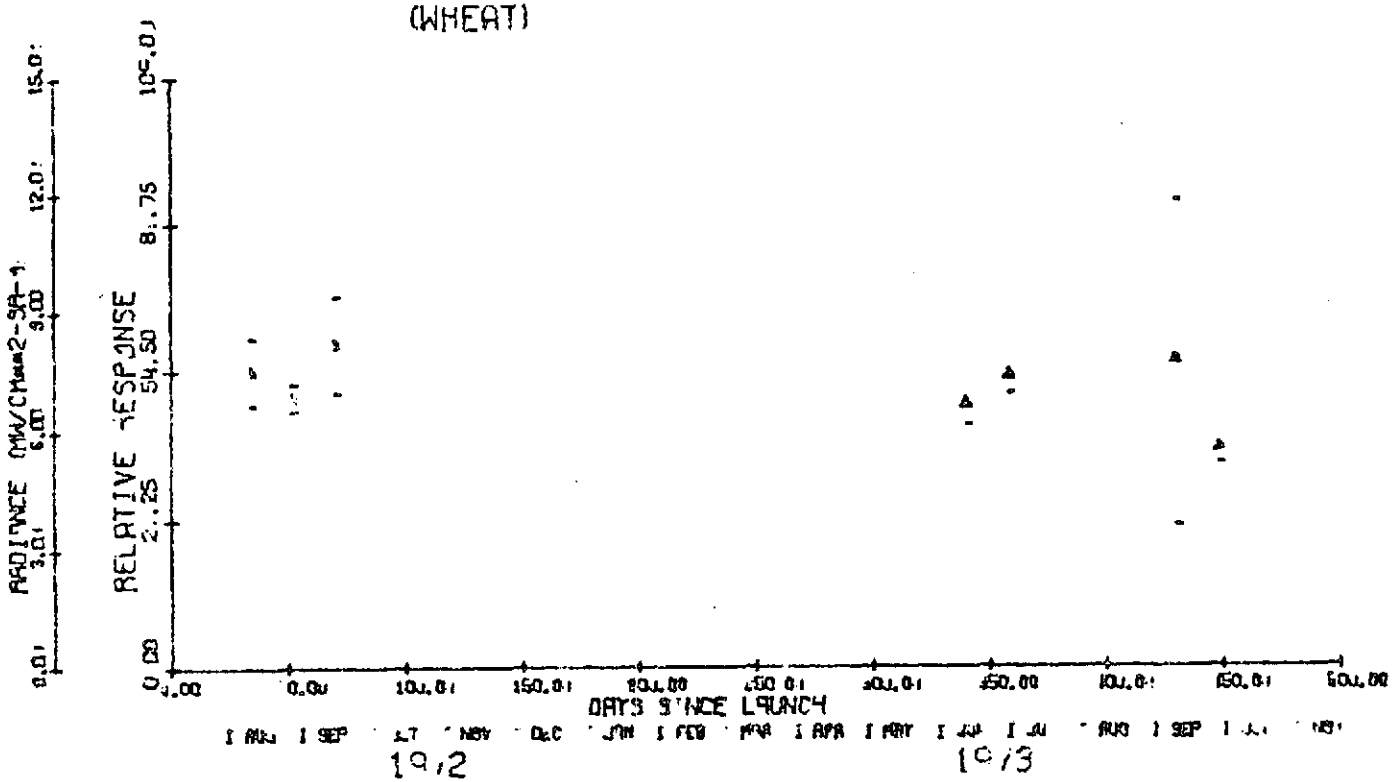
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BAND 4 0.5-0.6 M
CAMAS ID.
(WHEAT)



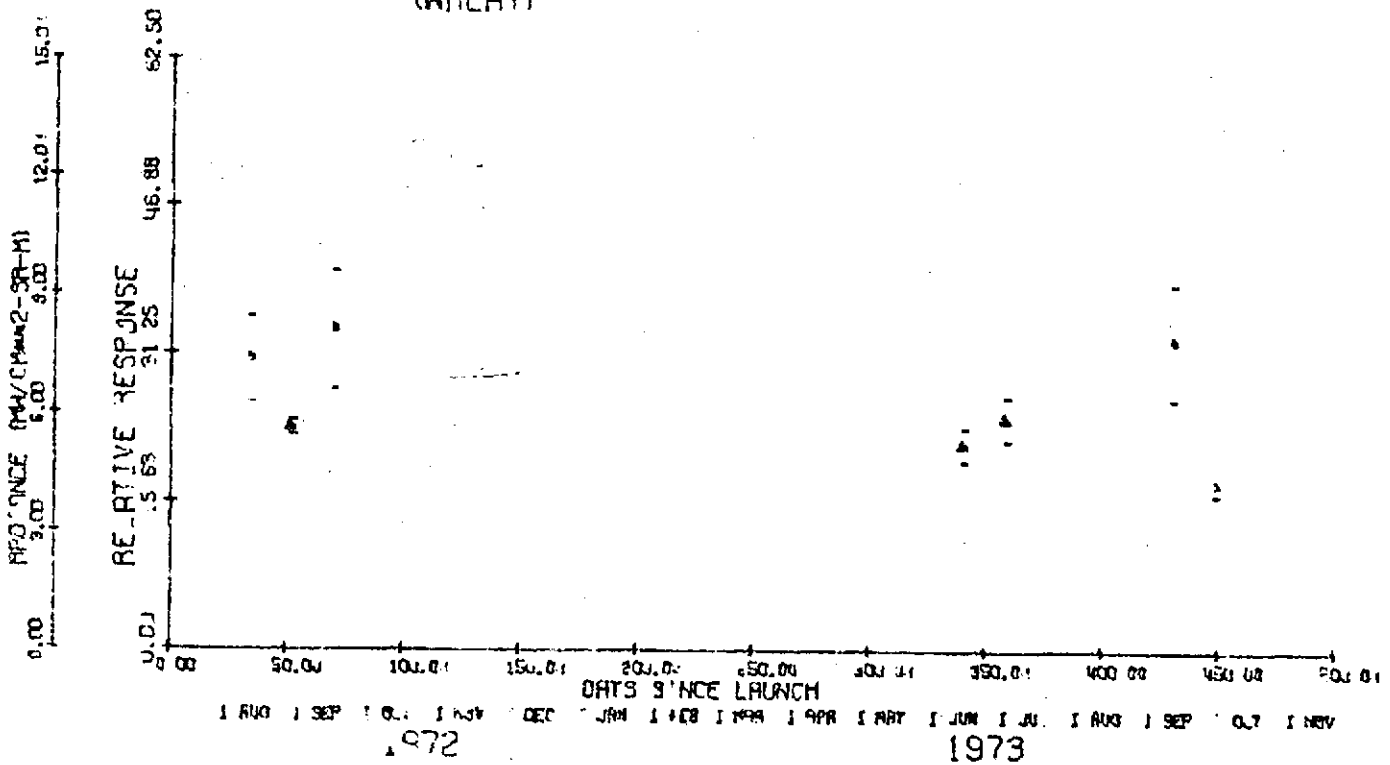
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
CAMAS, ID.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
CAMAS ID.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
CAMAS, ID.
(WHEAT)



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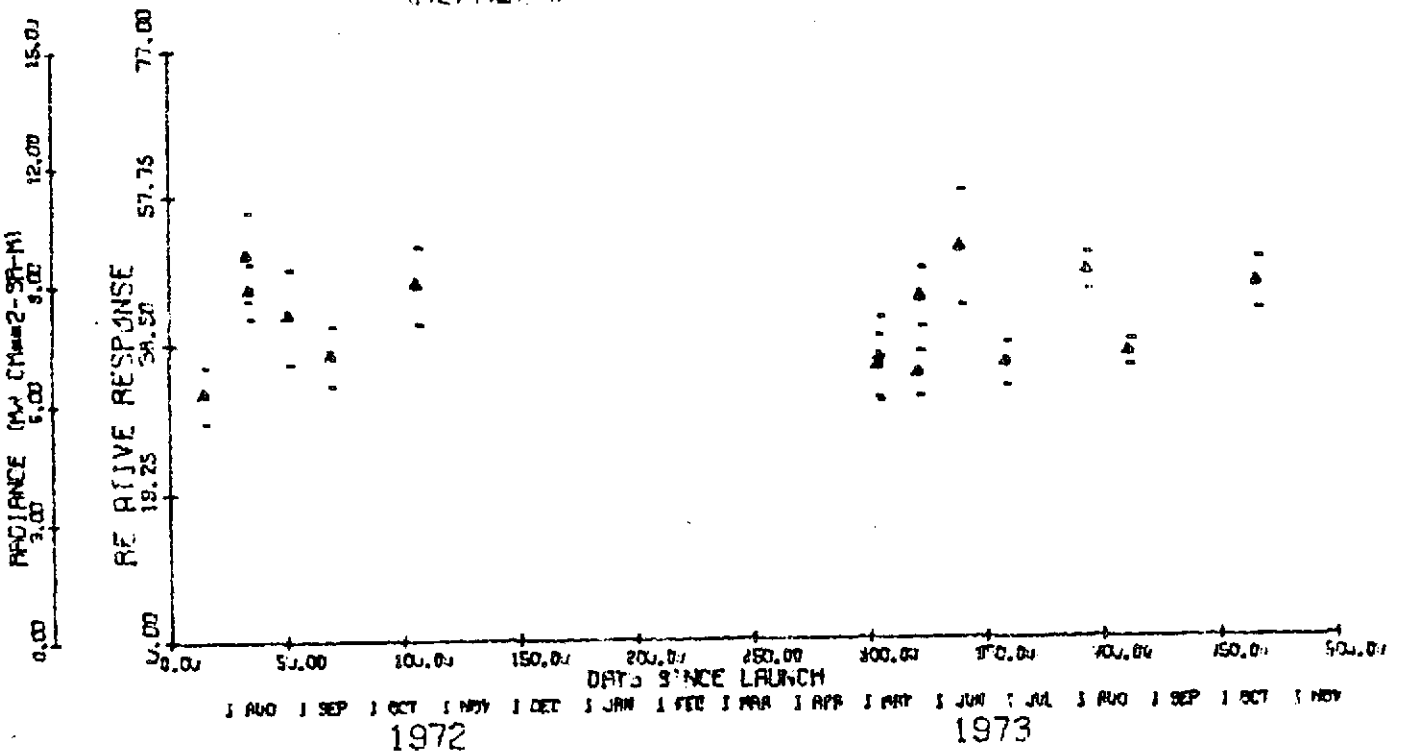
ROCKY MOUNTAIN CORRIDOR

Snowville, UT
41°59'N, 112°39'W

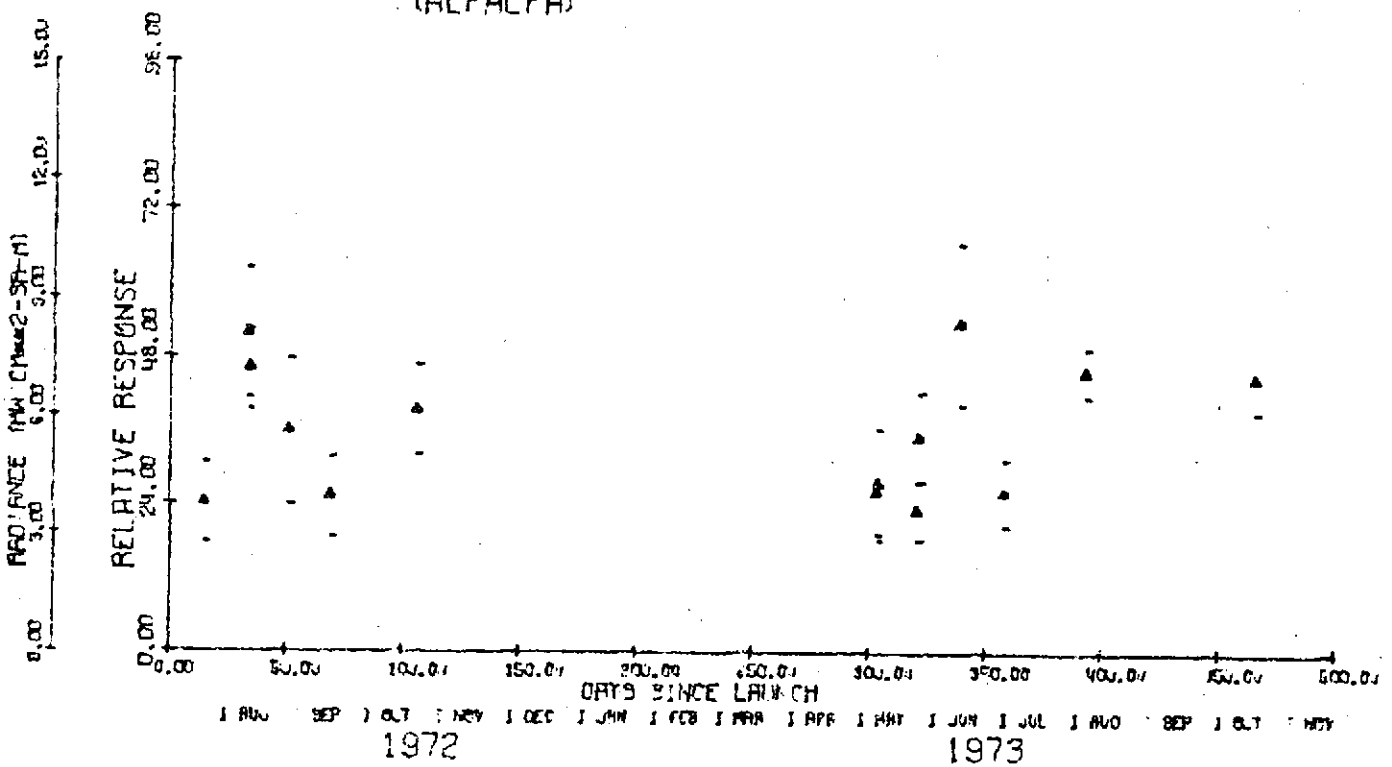
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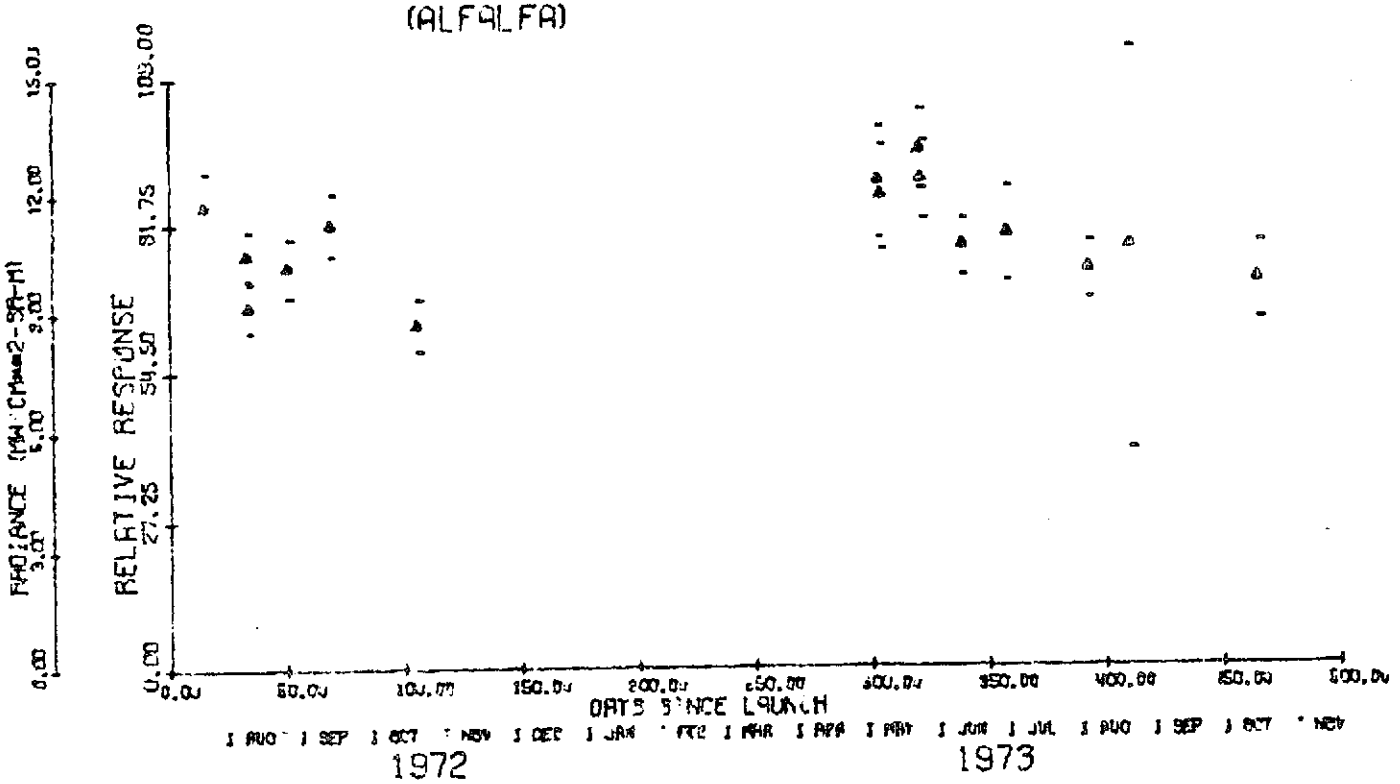
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
SNOWILLE, UT.
(ALFALFA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
SNOVILLE UT.
(ALFALFA)

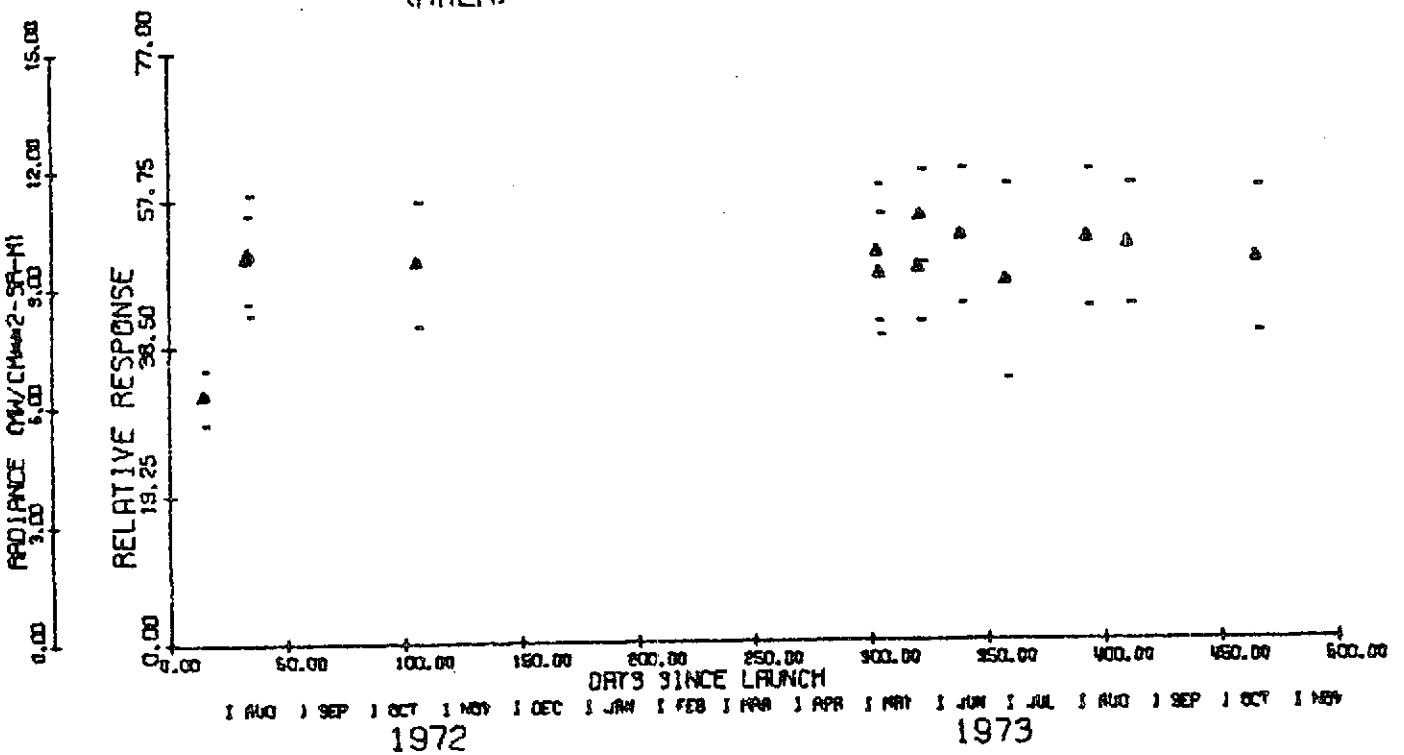


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BAND 6 0.7-0.8 M
SNOVILLE, UT.
(ALFALFA)

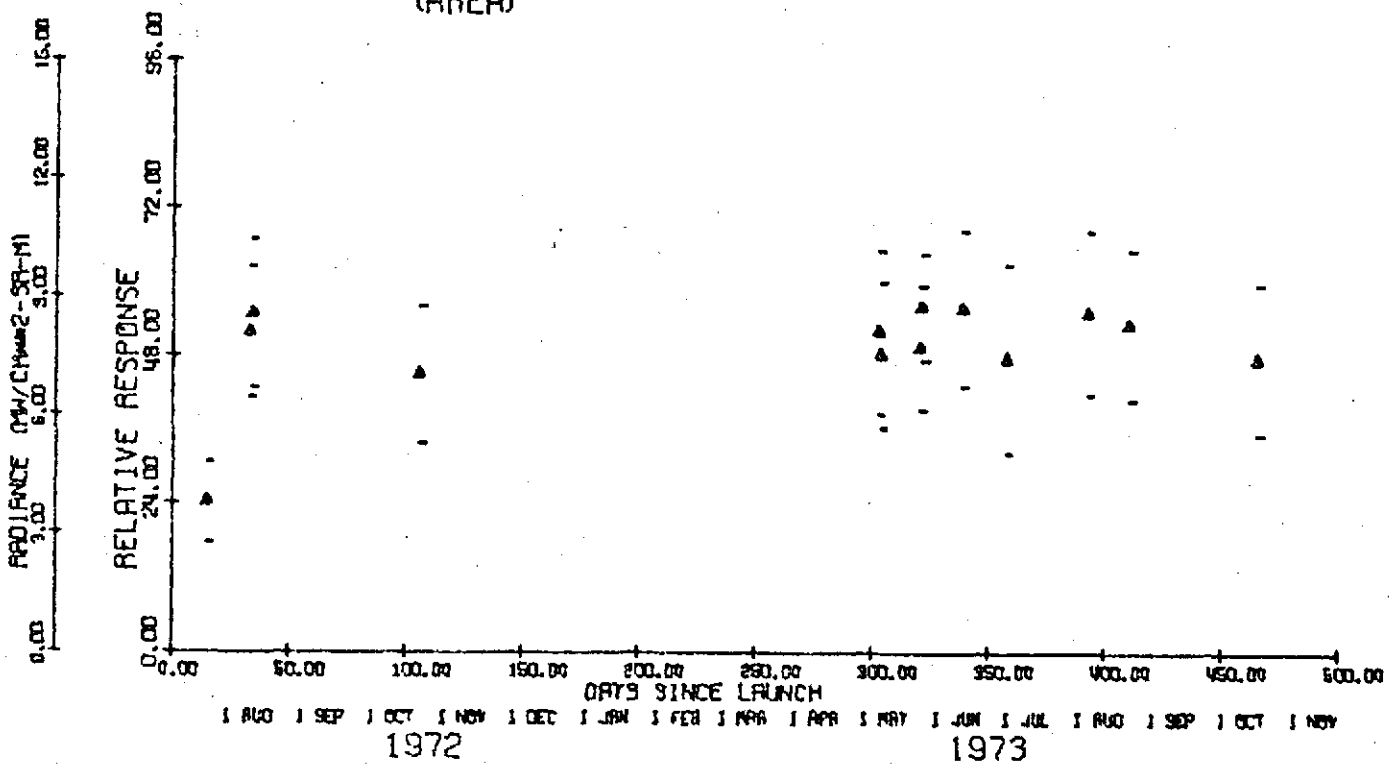


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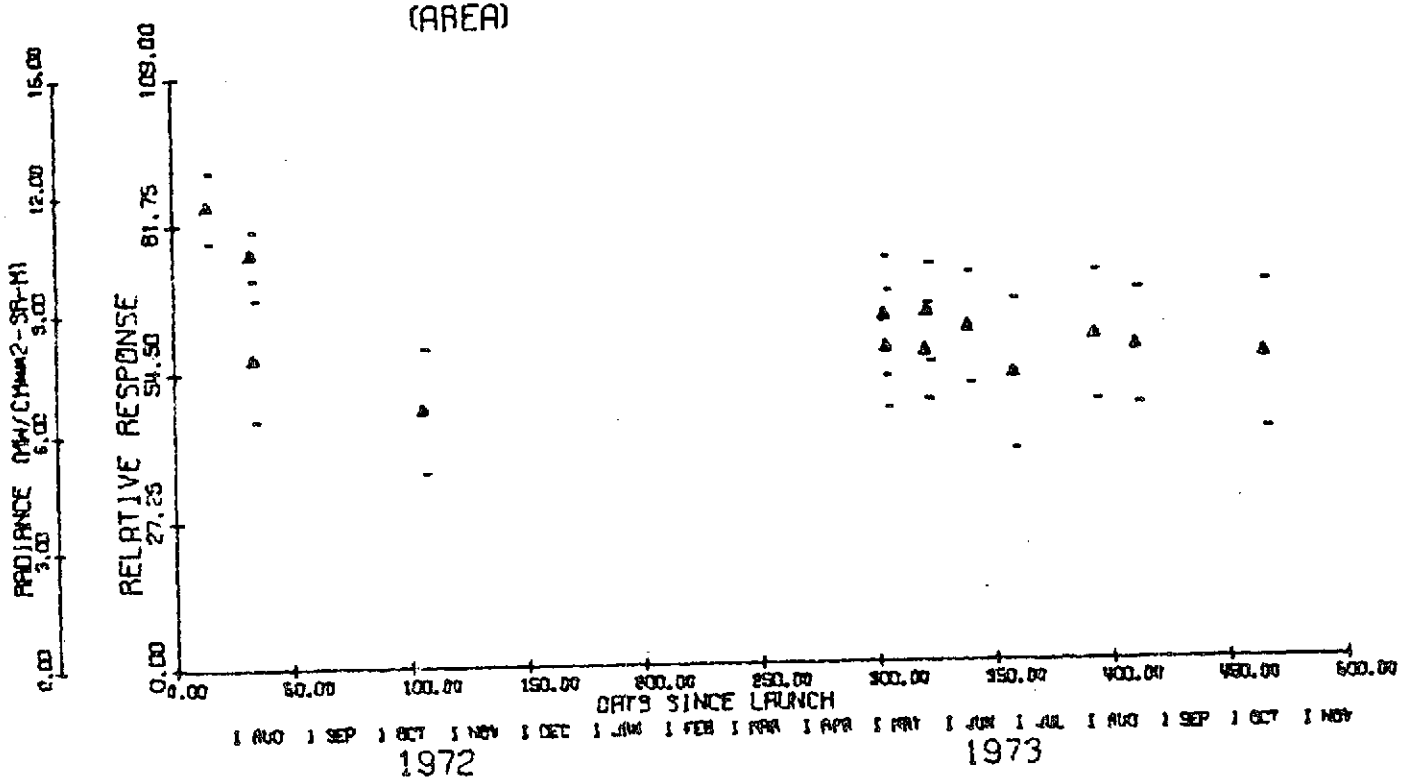
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BAND 4 0.5-0.6 M
SNOVILLE,UT.
(AREA)



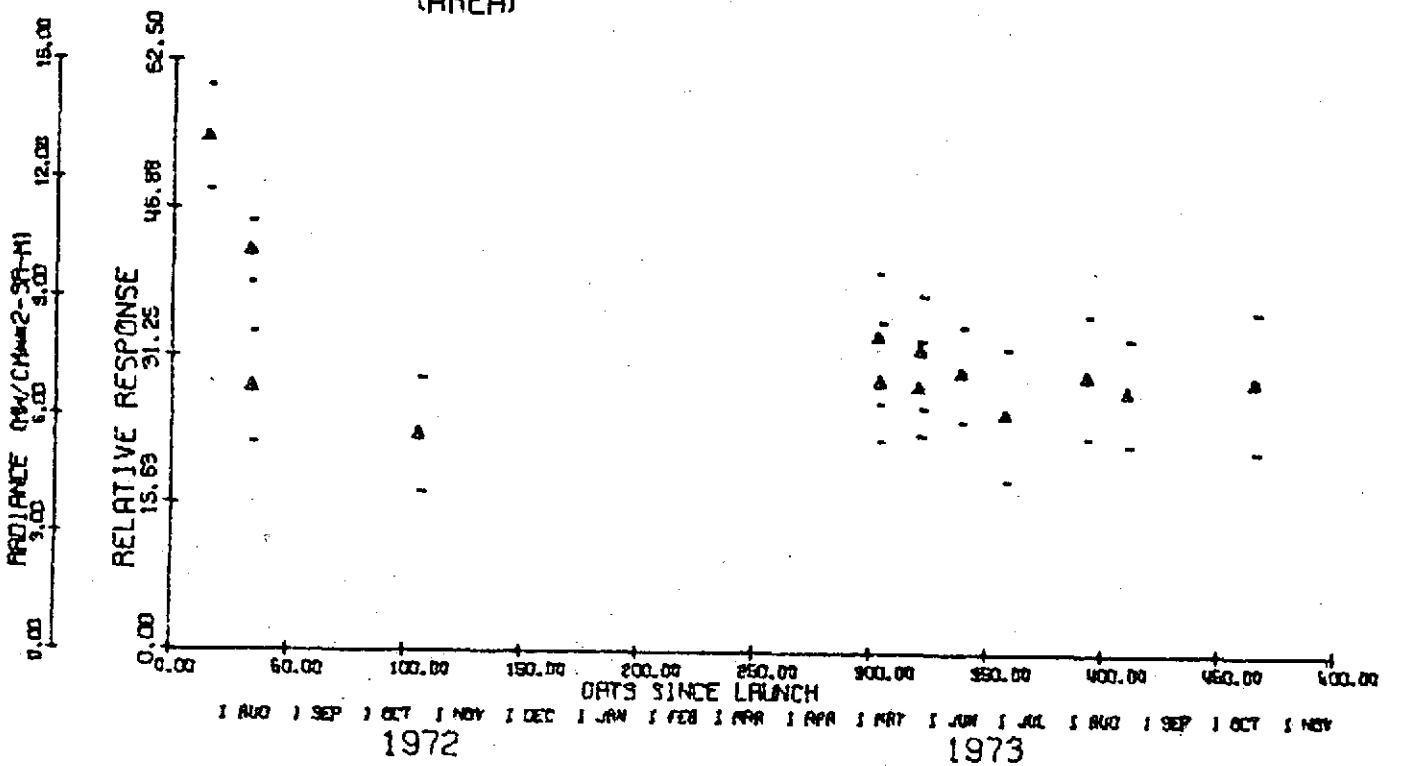
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RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
SNOVILLE,UT.
(AREA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
SNOVILLE,UT.
(AREA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
SNOVILLE,UT.
(AREA)



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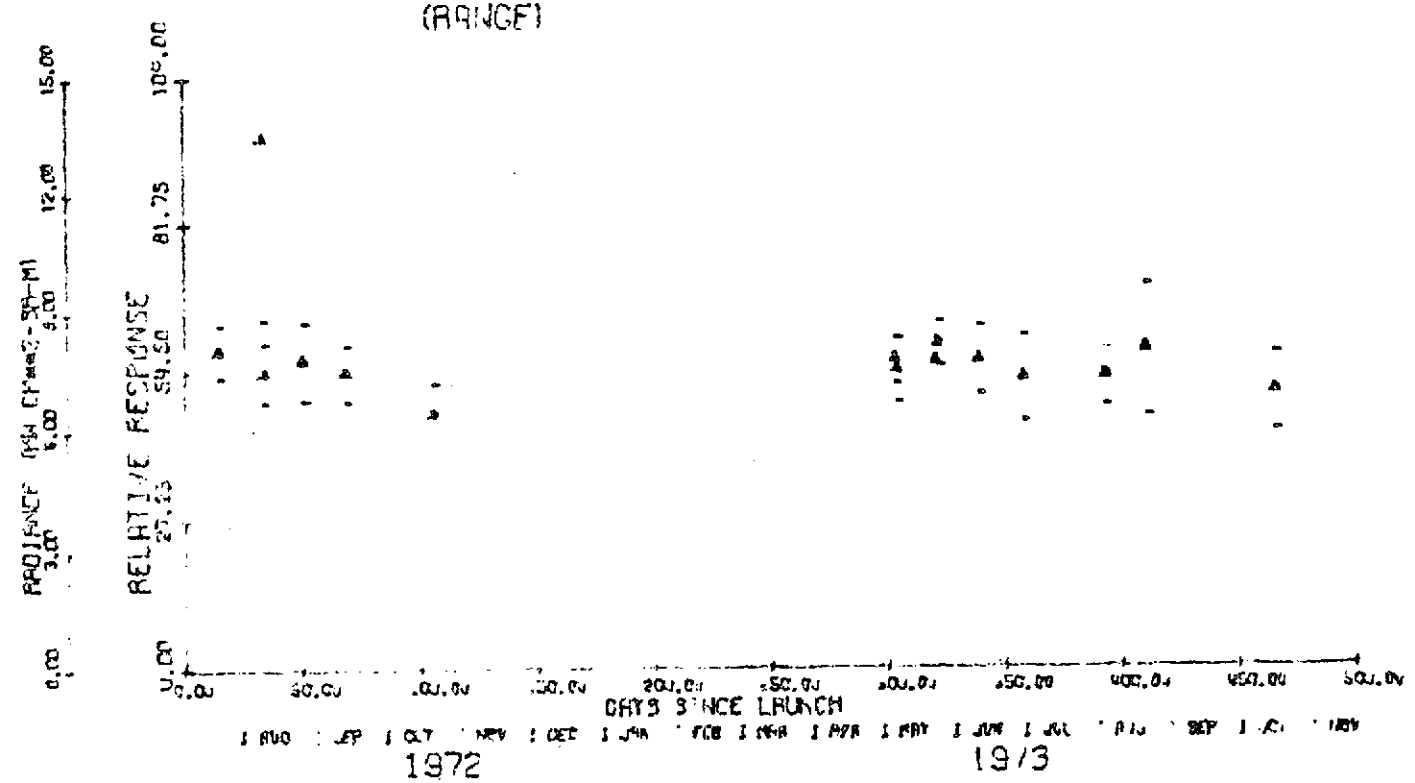
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
SNOVILLE, UT
(RANGE)

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ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
SNOVILLE UT
(RANGE)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
SNOVILLE, UT.
(RANGE)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
SNOVILLE, UT
(RANGE)

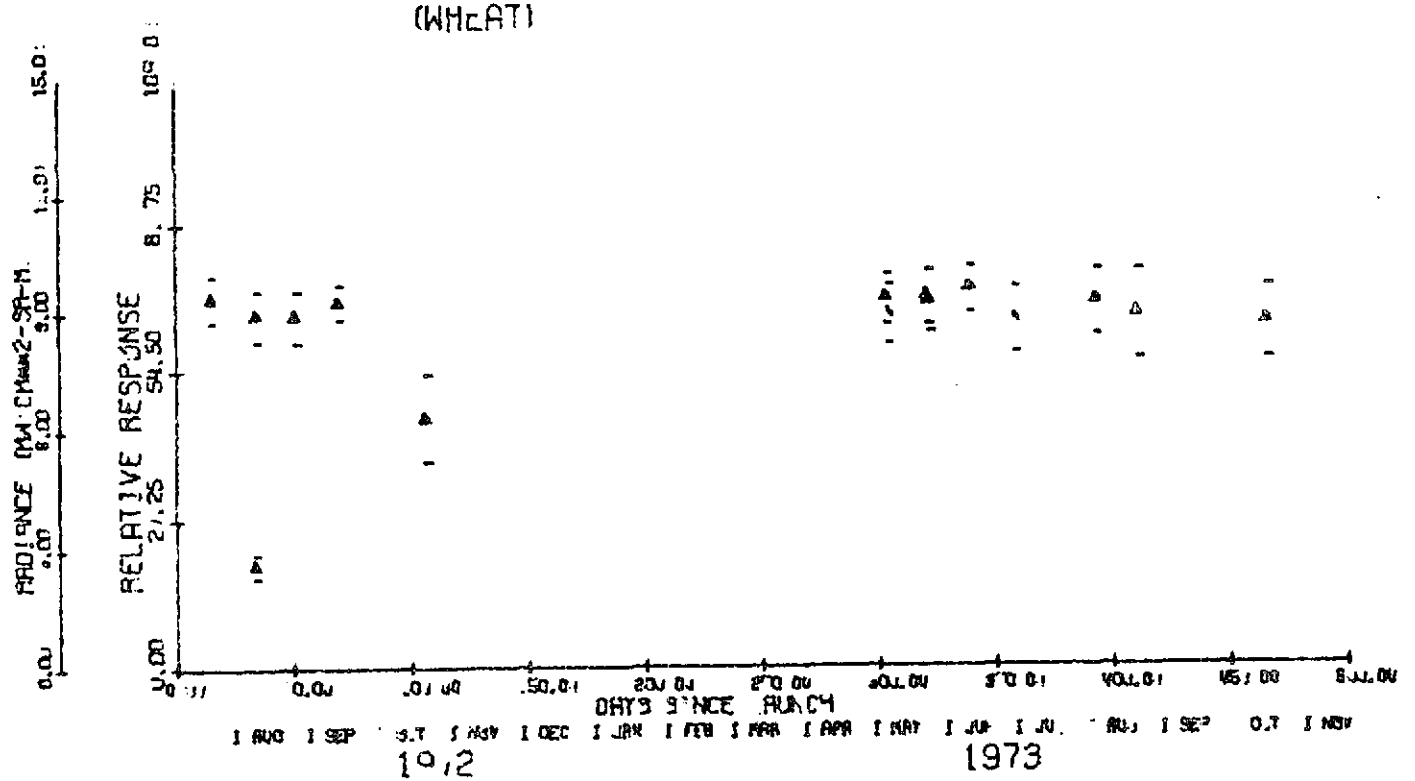
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BAND 4 0.5-0.6 M
SNOVILLE, UT
(WHEAT)

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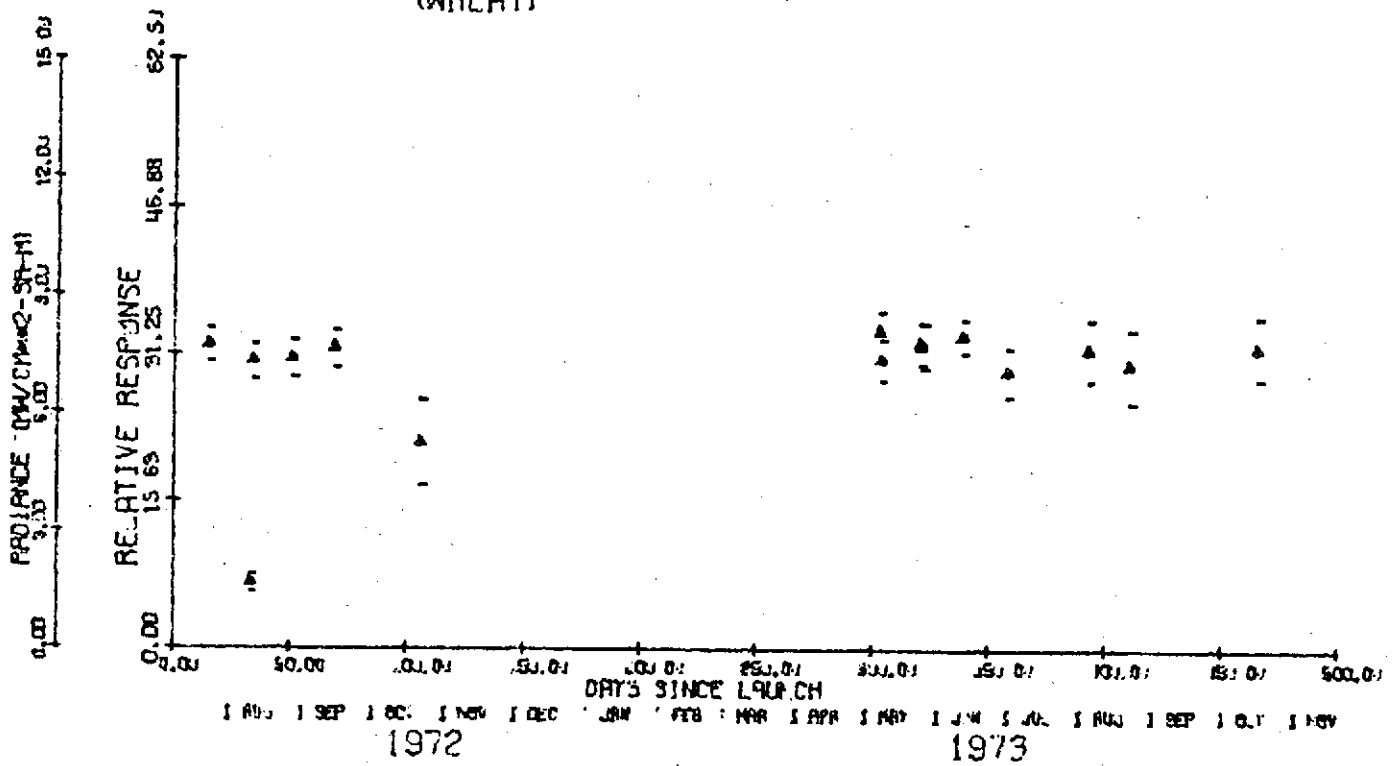
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
SNOVILLE, UT.
(WHEAT)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
SNOVILLE, UT.
(WHEAT)




10/2

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
SNOVILLE, UT.
(WHEAT)



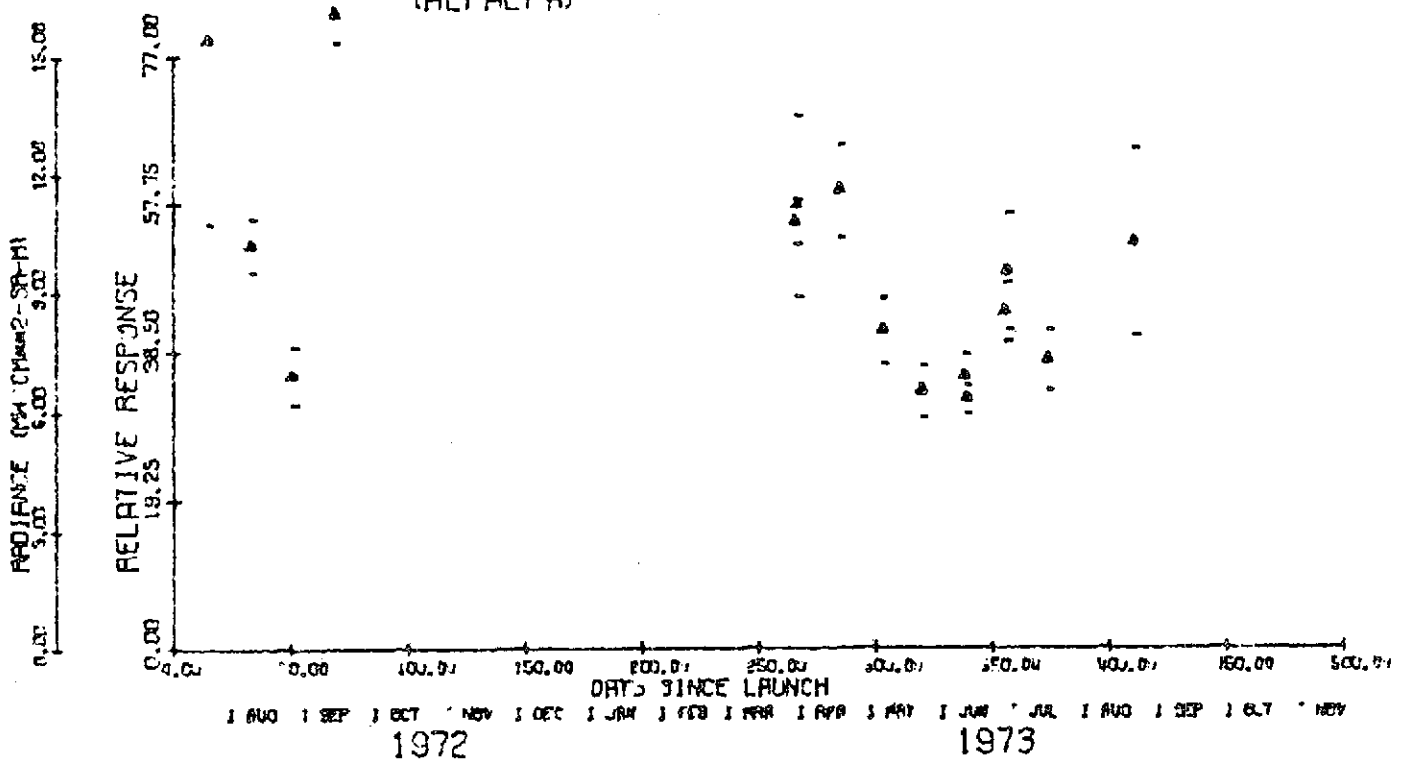
ROCKY MOUNTAIN CORRIDOR

Kanosh, UT
38°49'N, 112°33'W

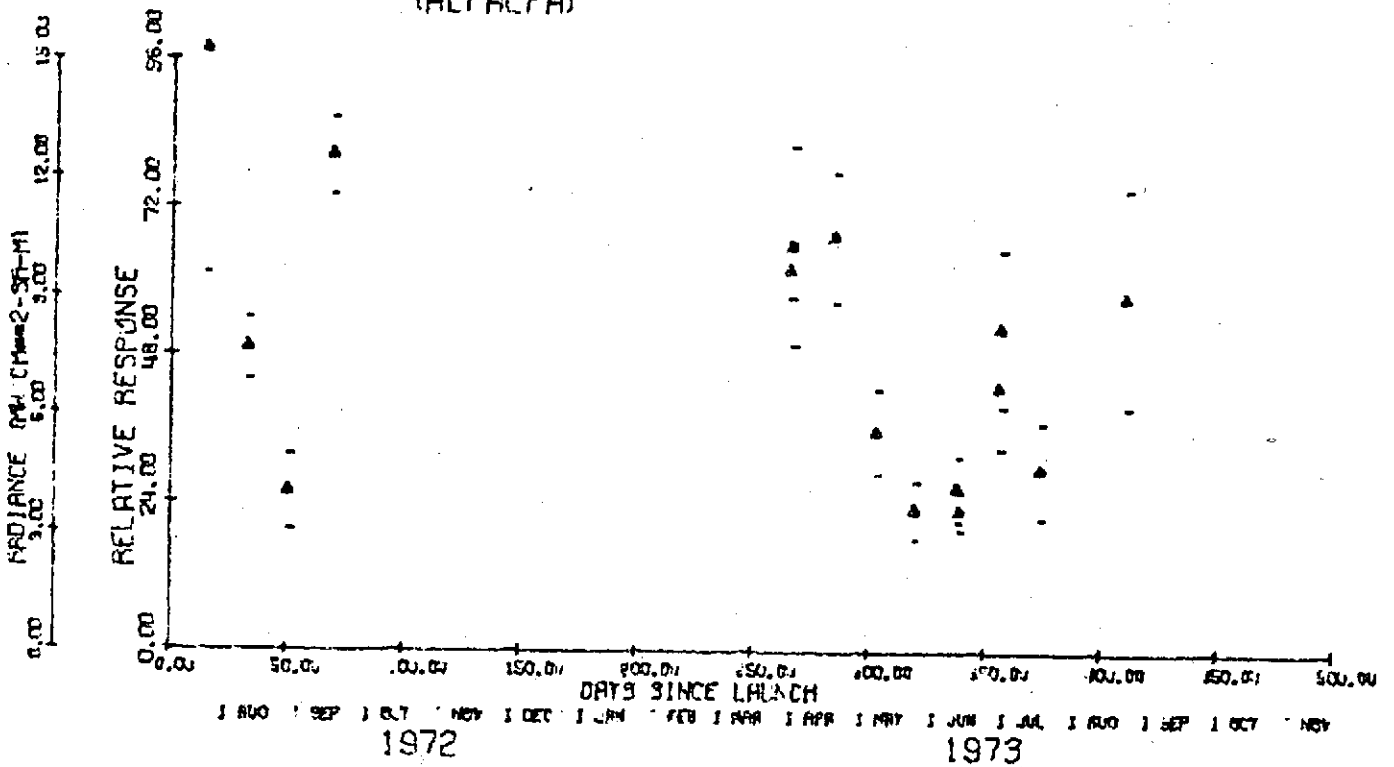


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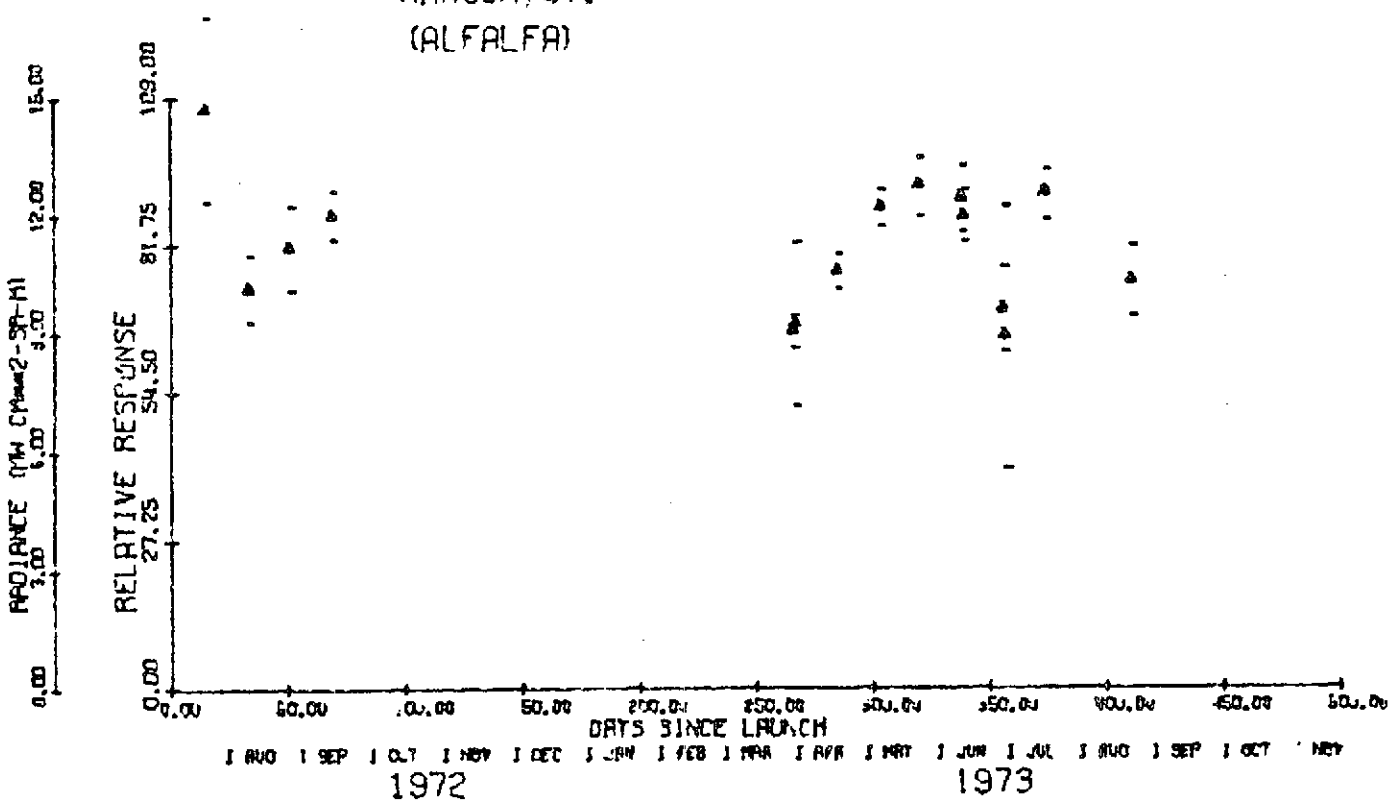
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BAND 4 0.5-0.6 M
KANOSH, UT.
(ALFALFA)



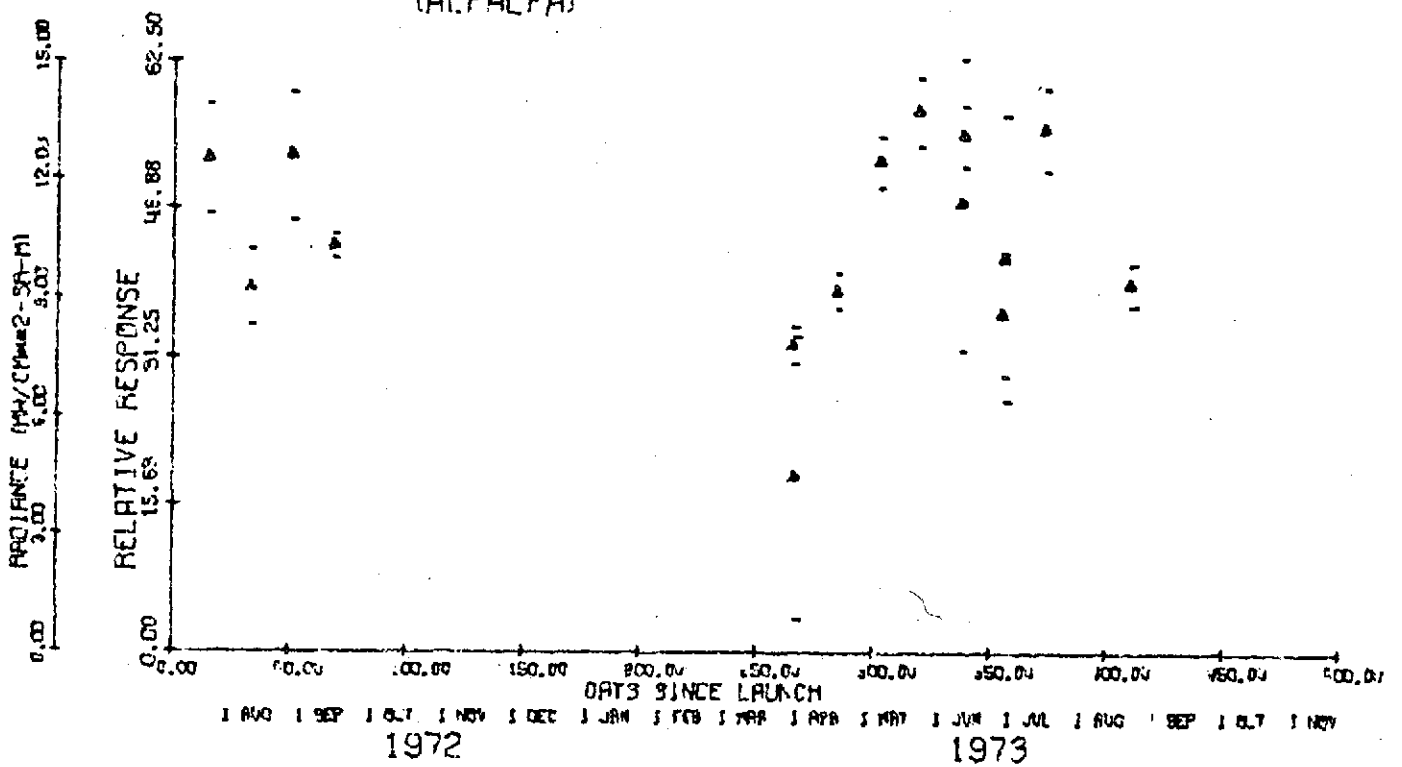
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KANOSH, UT.
(ALFALFA)



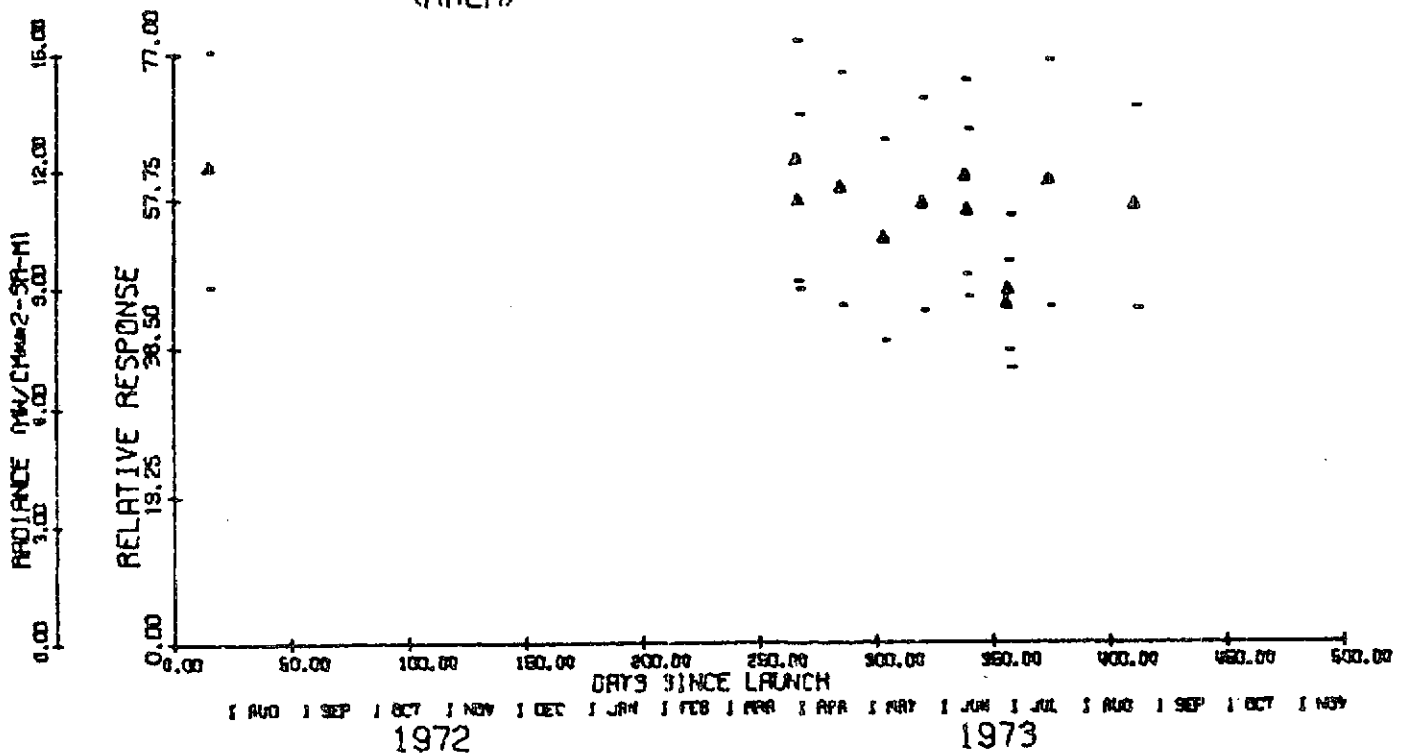
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BAND 6 0.7-0.8 M
KANOSH, UT.
(ALFALFA)



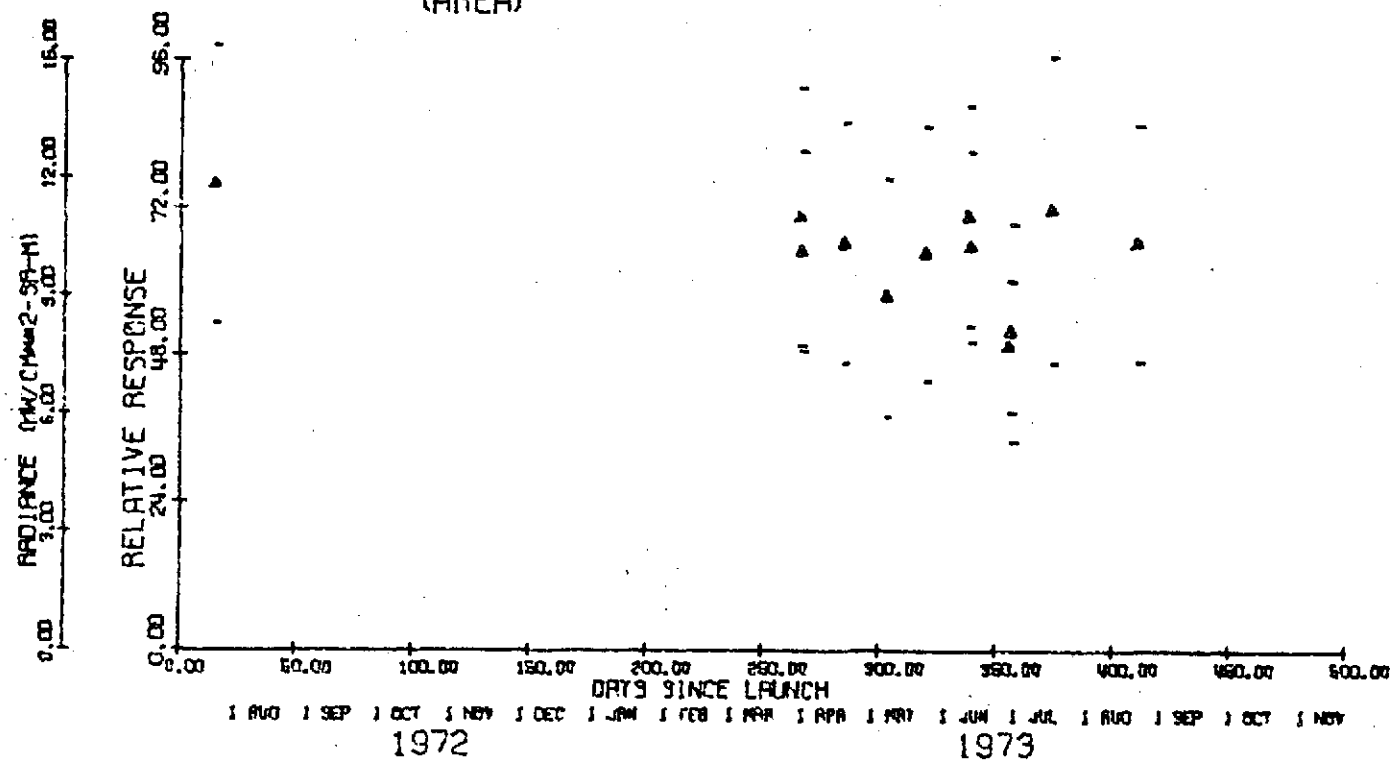
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BAND 7 0.8-1.1 M
KANOSH, UT.
(ALFALFA)

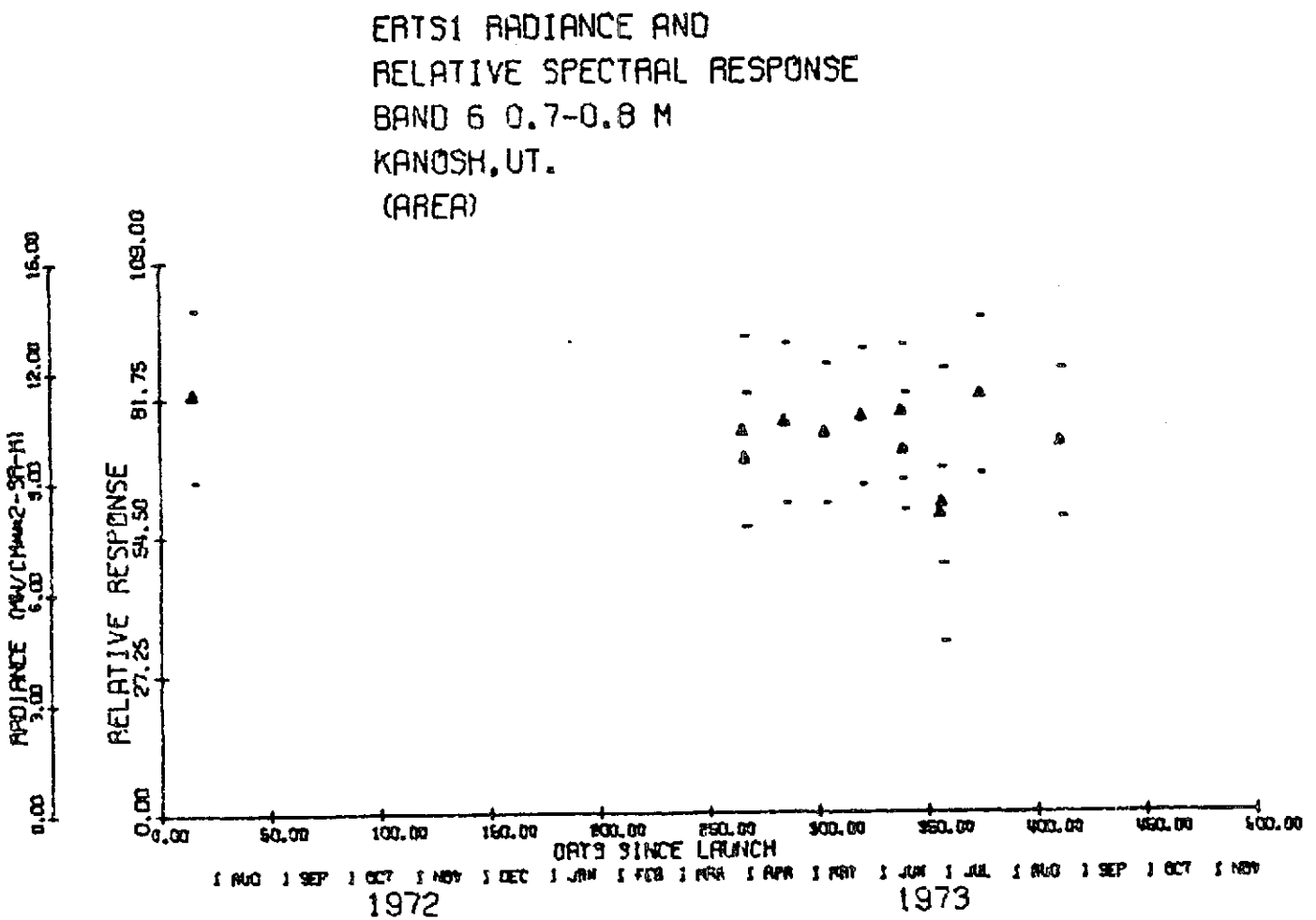


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
KANOSH, UT.
(AREA)

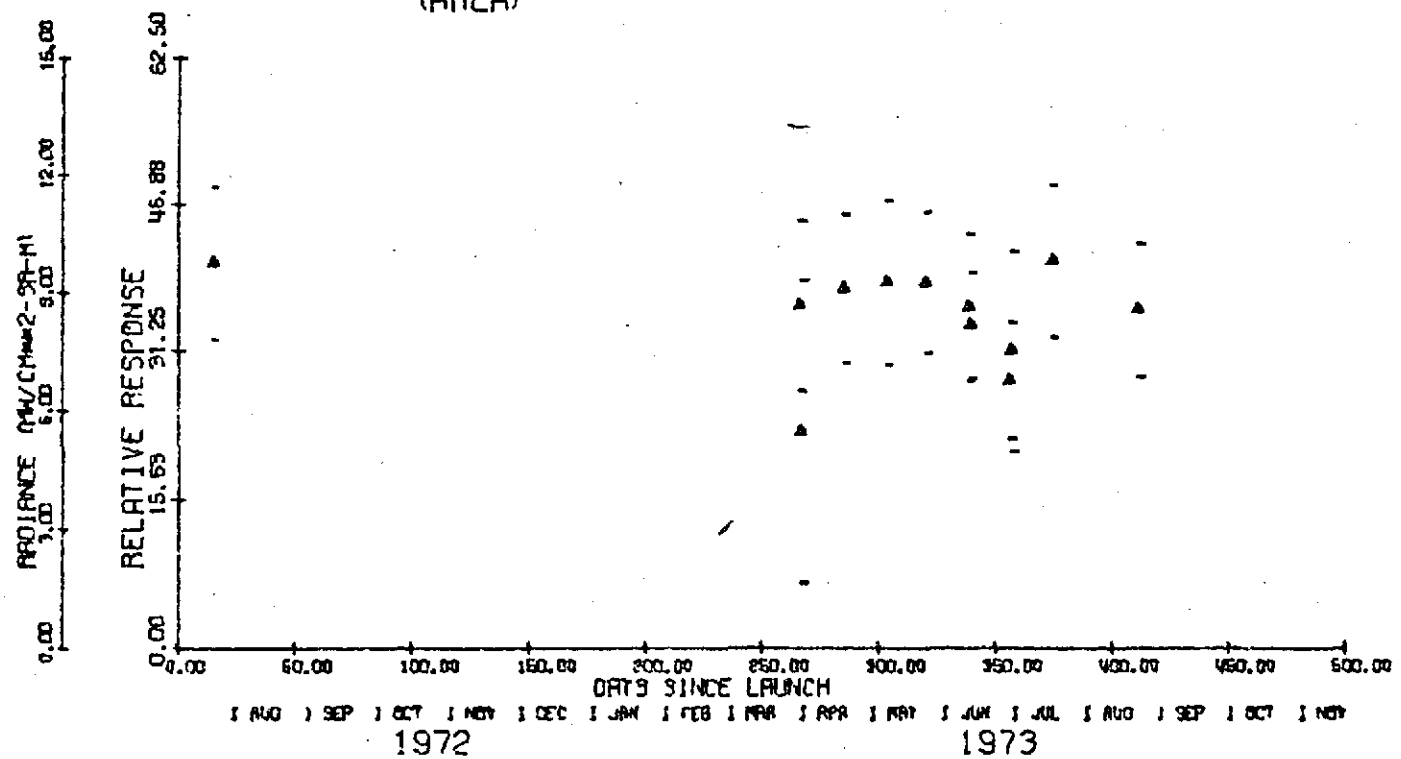


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
KANOSH, UT.
(AREA)




ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
KANOSH, UT.
(AREA)
RADIANCE (MW/CM**2-SR-U)
0.00
3.00
6.00
9.00
12.00
15.00
RELATIVE RESPONSE
0.00
27.25
54.50
81.75
109.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
400.00
450.00
500.00
DAYS SINCE LAUNCH
AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV
1972
1973

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
KANOSH,UT.
(AREA)



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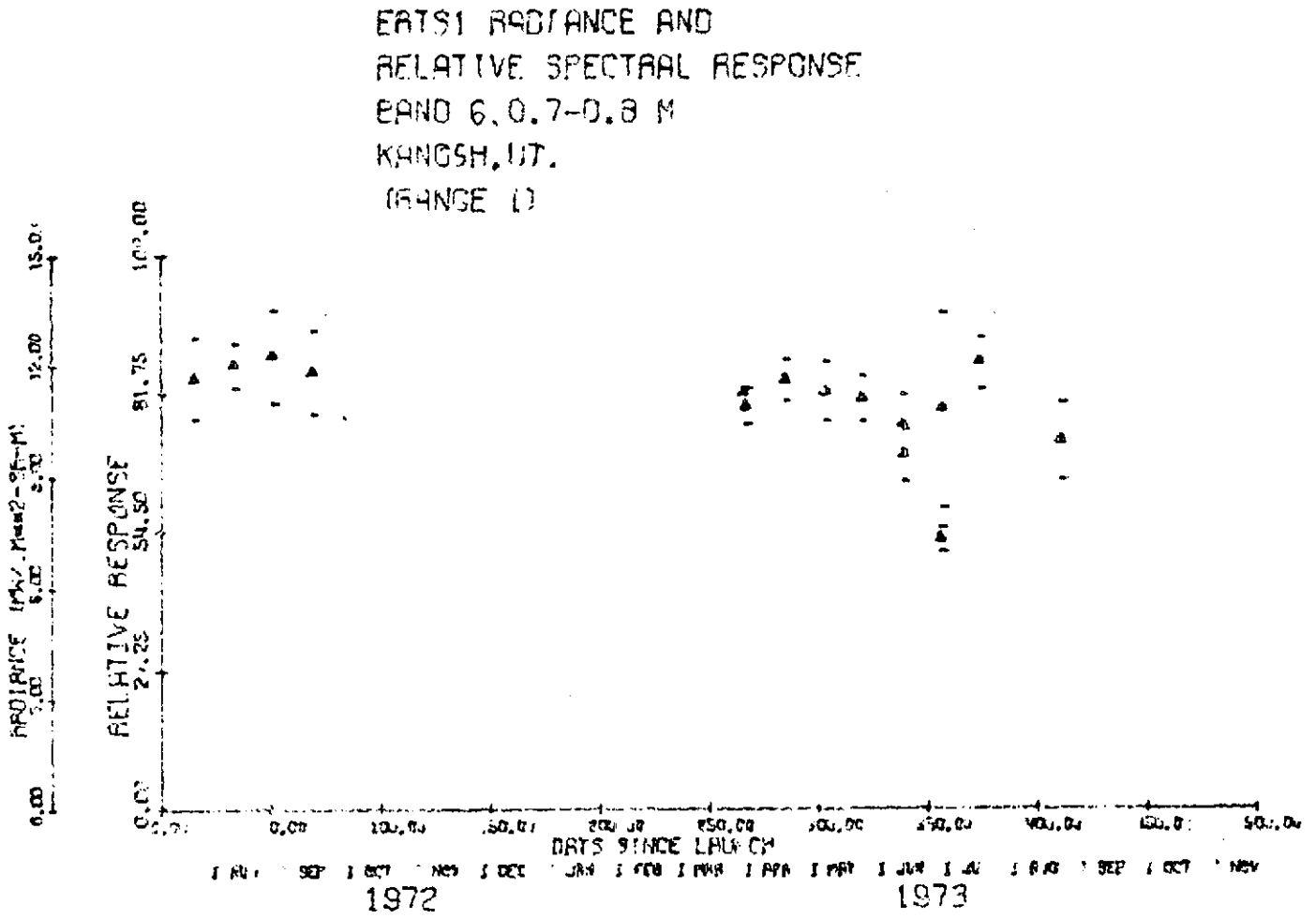


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
KANOSH UT
(RANGE 1)

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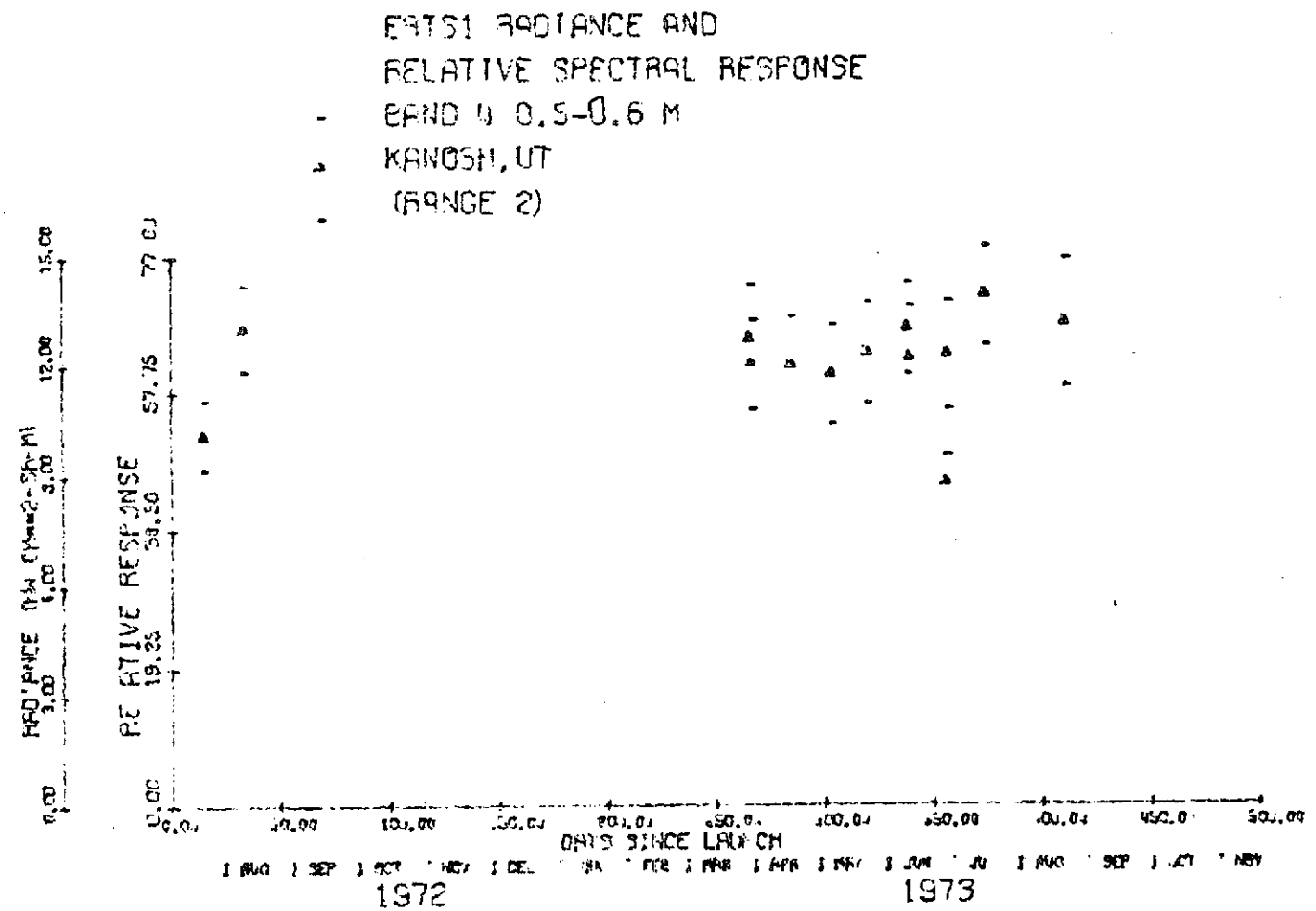
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
KANOSH UT.
(RANGE 1)


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6, 0.7-0.8 M
KANGSH, UT.
(RANGE 1)
RADIANCE (MW/...
RELATIVE RESPONSE
81.75
54.50
27.25
0.00
DAYS SINCE LAUNCH
1972
1973

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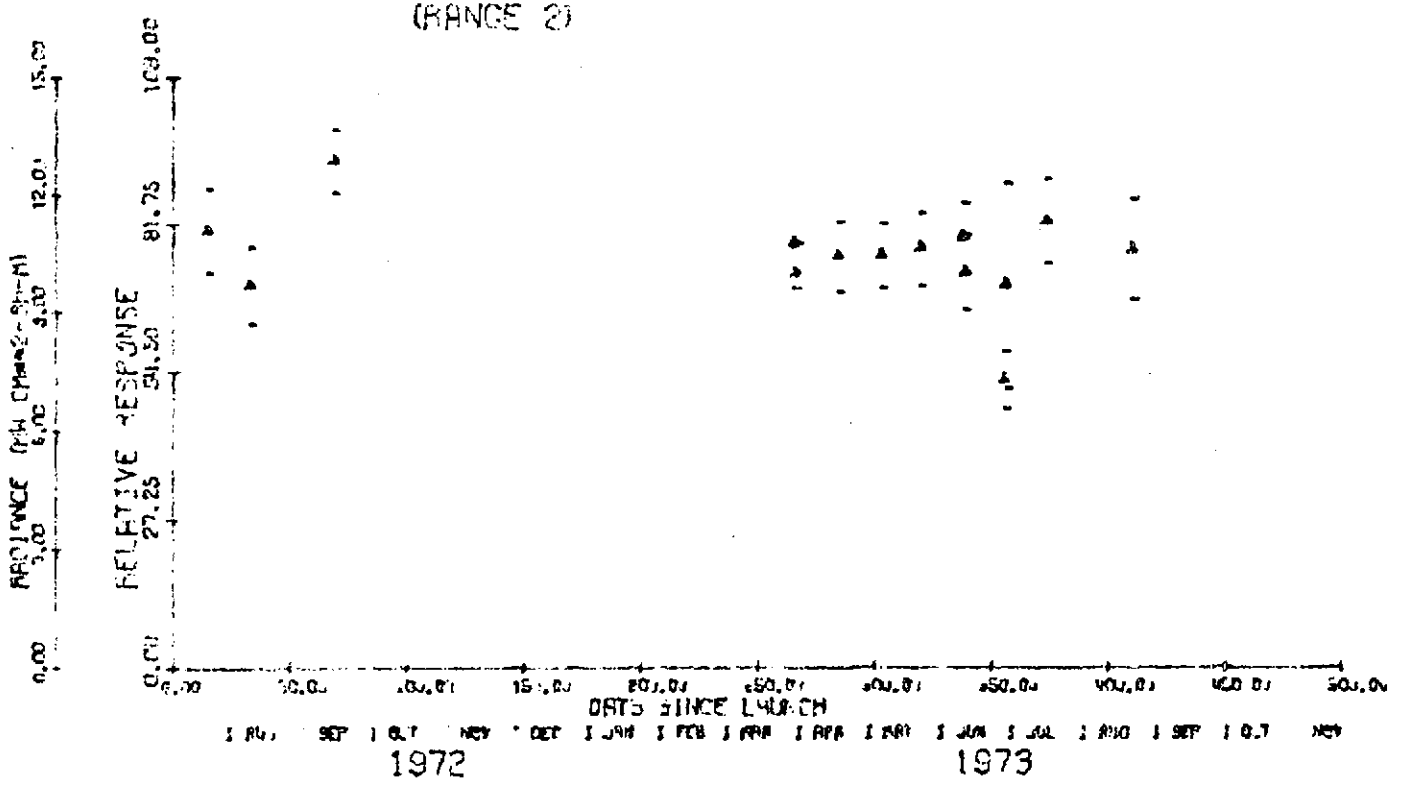
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0 9-1.1 M
KANOSH, UT.
(RANGE 1)


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
KANOSH, UT
(RANGE 2)
RADIANCE
RELATIVE RESPONSE
DAYS SINCE LAUNCH
1972
1973

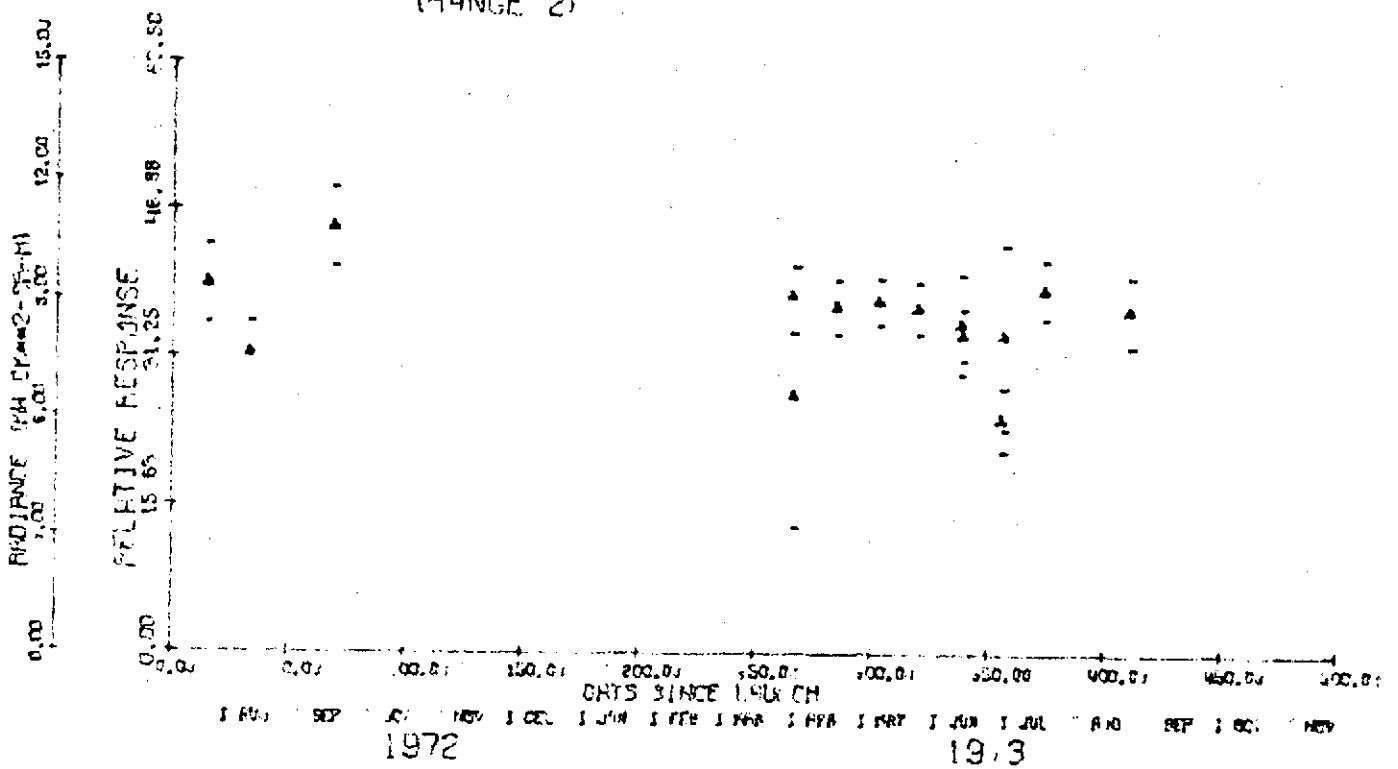
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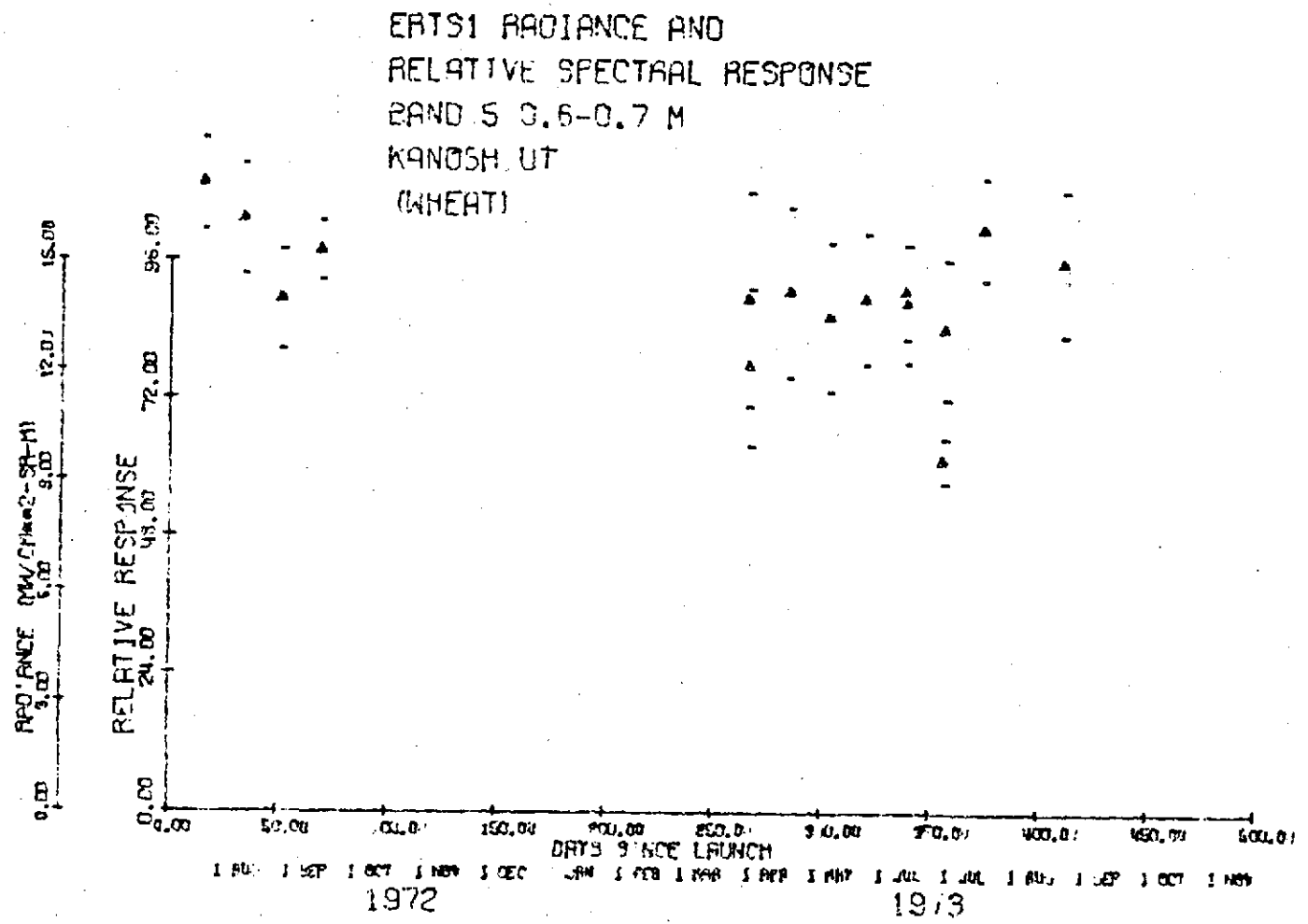
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
KANOSH,UT.
(RANGE 2)


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
KANOSH UT.
(RANGE 2)
RADIANCE (MW CM**2-SR-M)
RELATIVE RESPONSE
DAYS SINCE LAUNCH
1972
1973

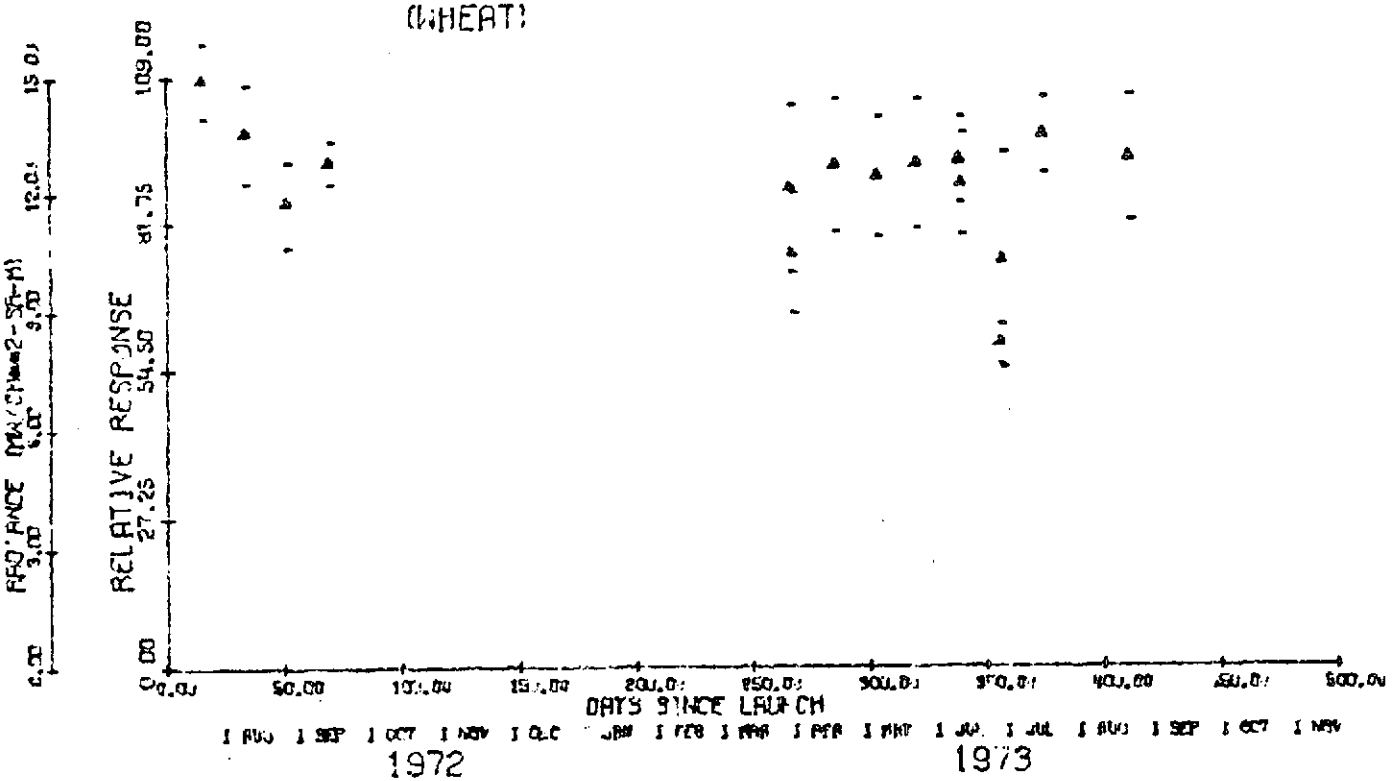
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RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
KANOSH UT.
(RANGE 2)



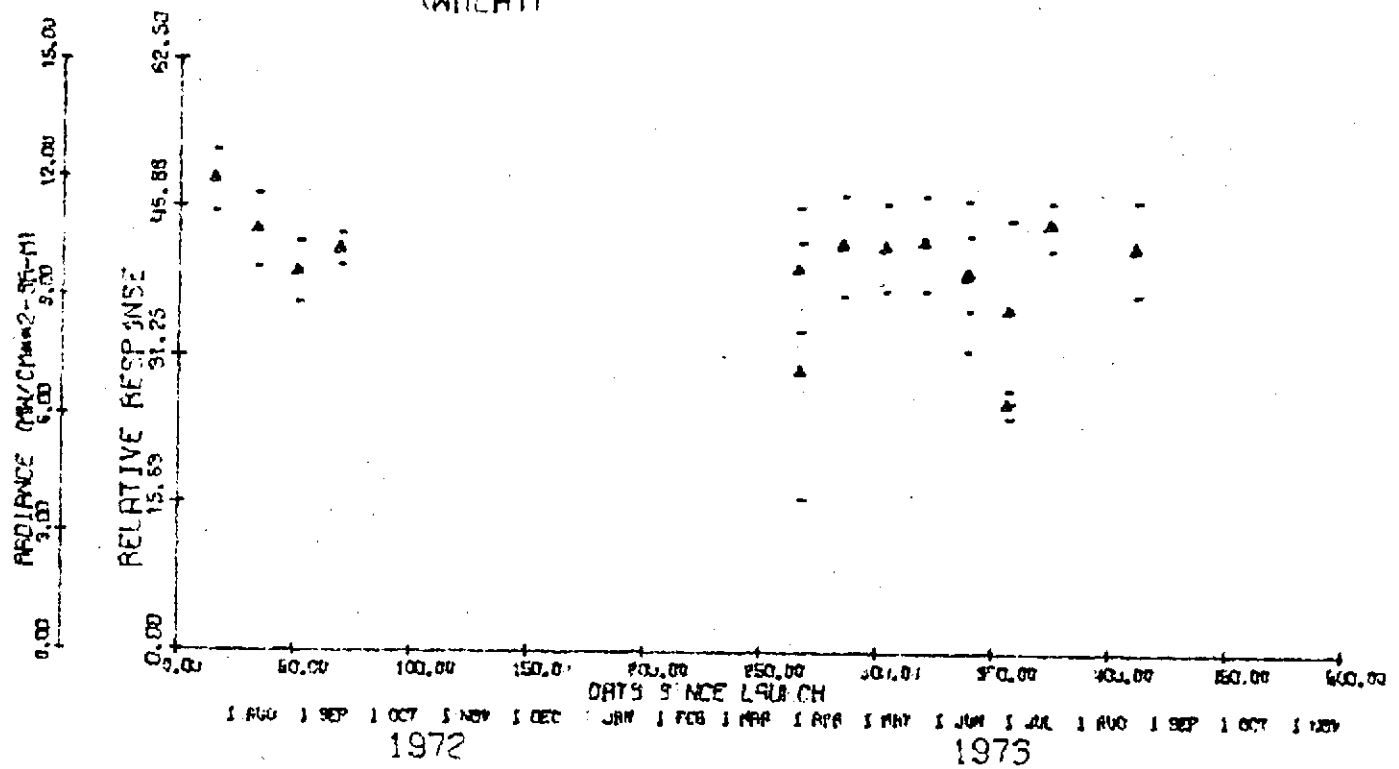
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RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.8 M
KANOSH, UT.
(WHEAT)


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
KANOSH UT
(WHEAT)
RADIANCE (MW/CM**2-SR-MI)
RELATIVE RESPONSE
DAYS SINCE LAUNCH
1972
1973

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
KANOSH, UT.
(WHEAT)



ERTS. RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
KANOSH, UT.
(WHEAT)



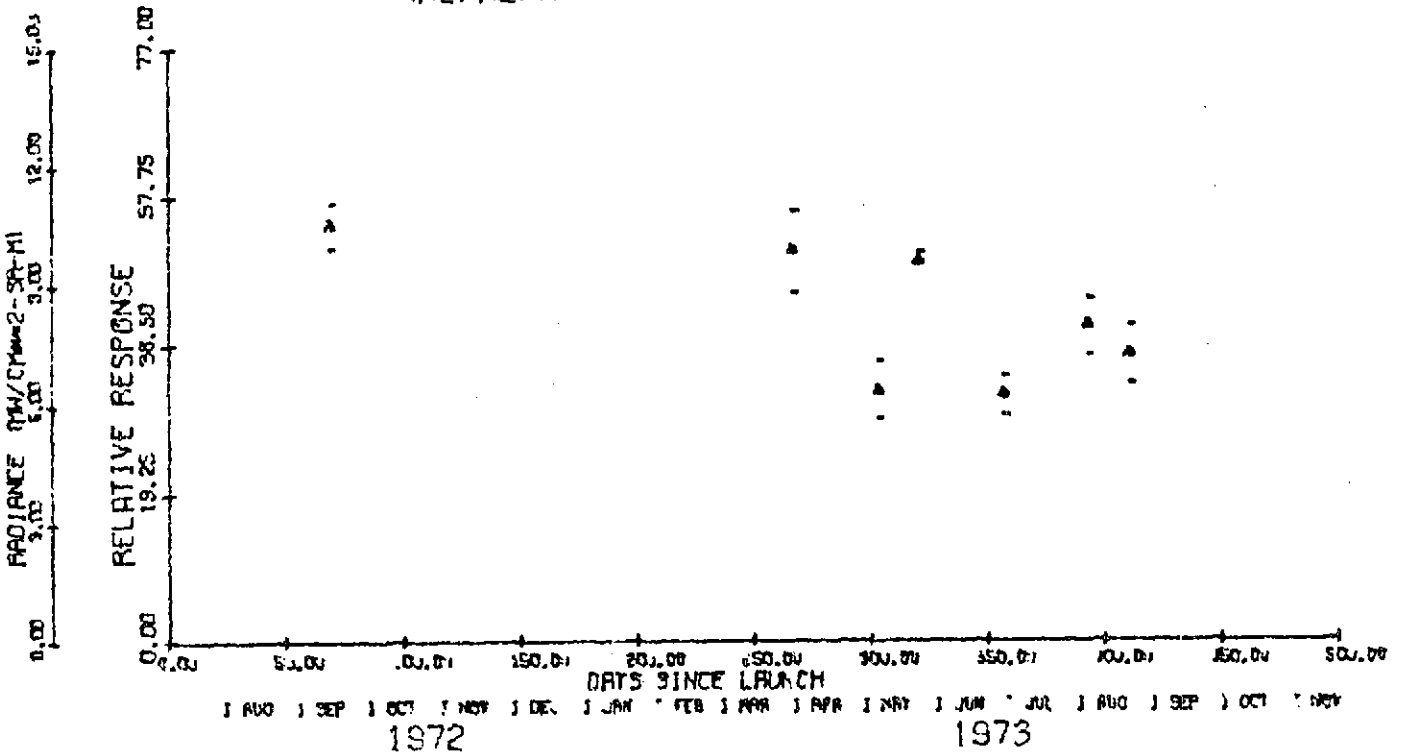
ROCKY MOUNTAIN CORRIDOR

Colorado City, AR
36°59'N, 112°59'W

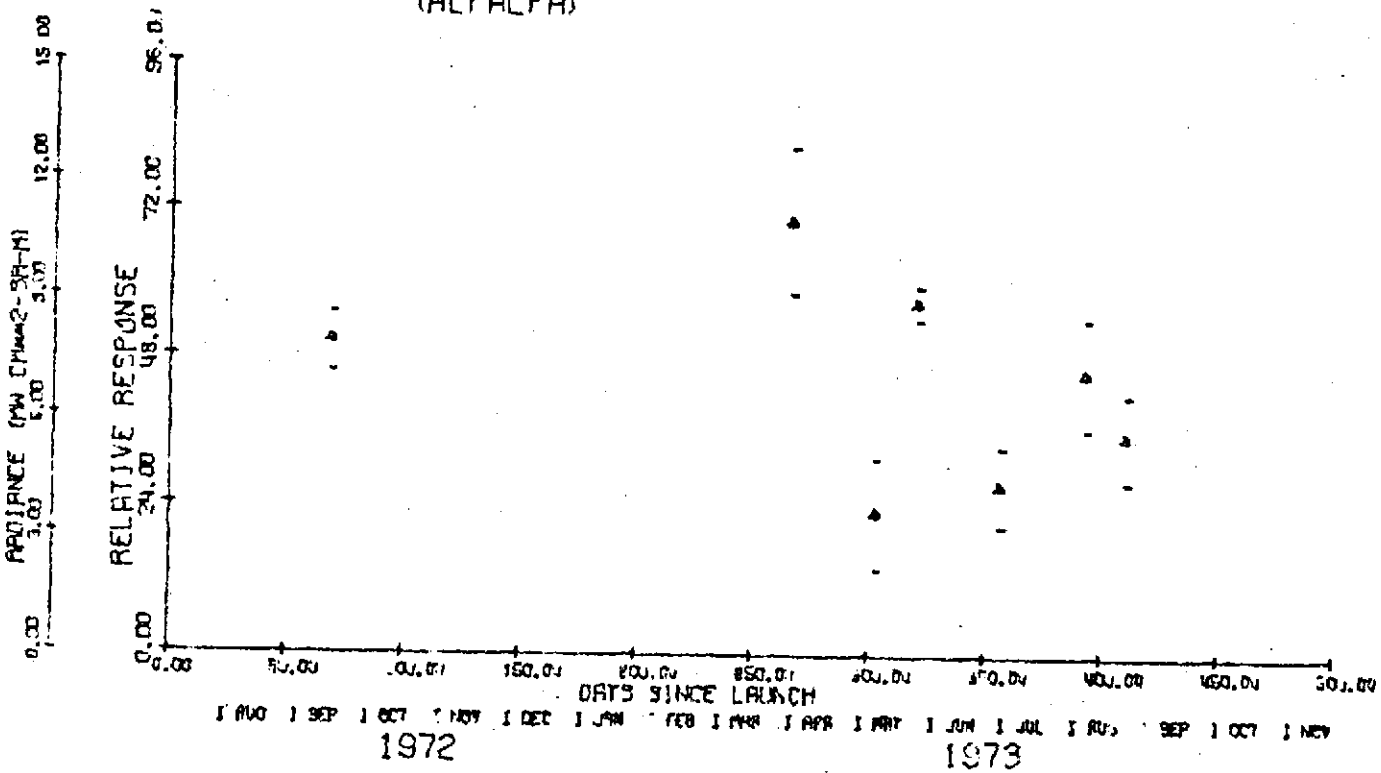


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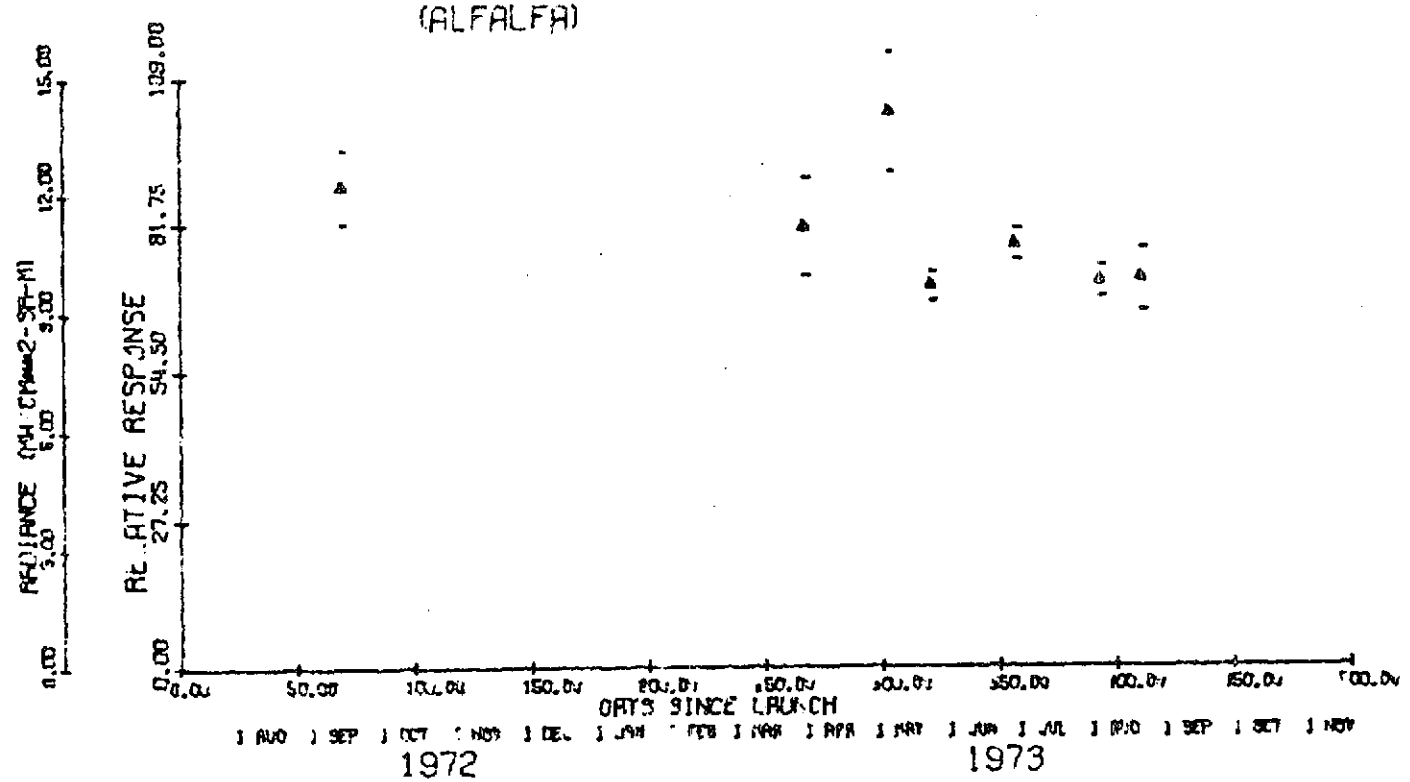
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RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
COLORADO CITY, AR.
(ALFALFA)



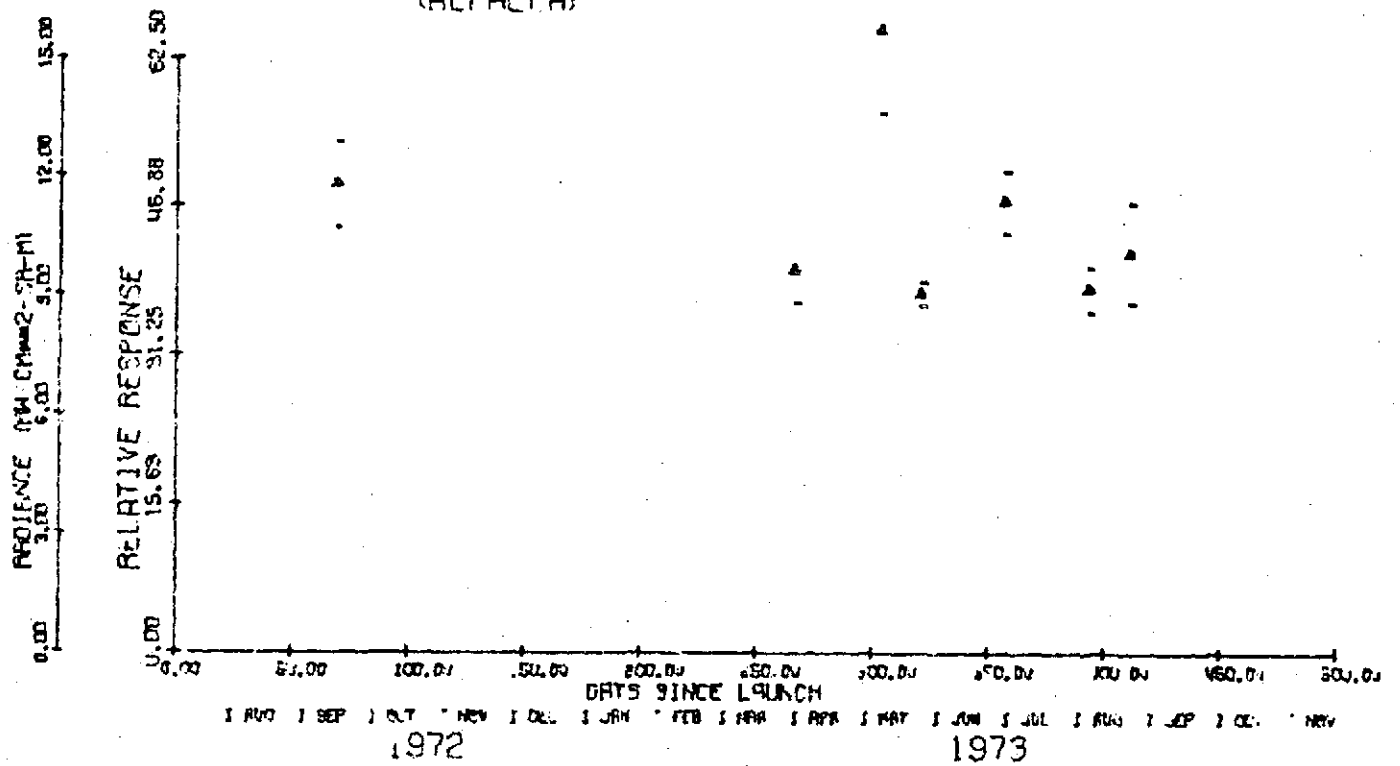
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BAND 5 0.6-0.7 M
COLORADO CITY, AR.
(ALFALFA)



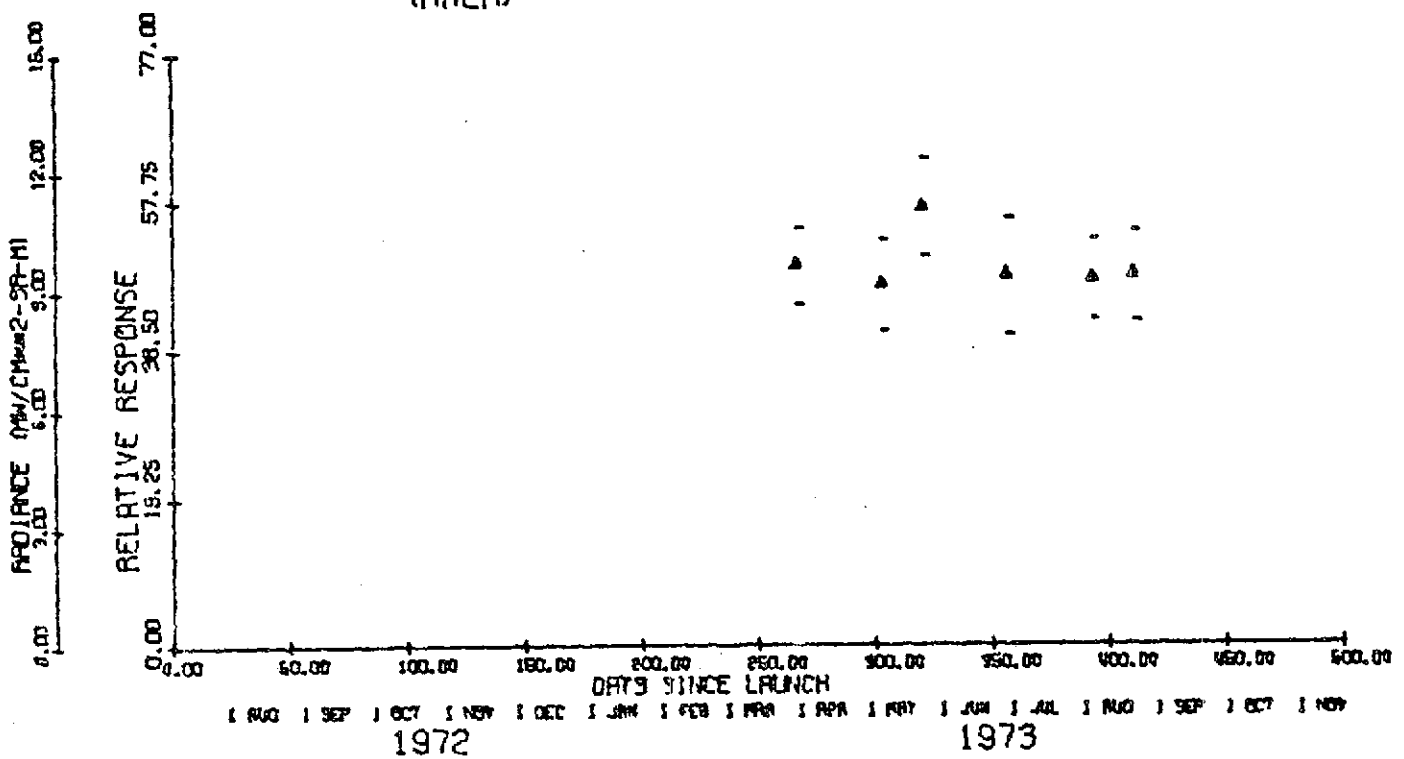
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BAND 6 0.7-0.8 M
COLORADO CITY, AR.
(ALFALFA)



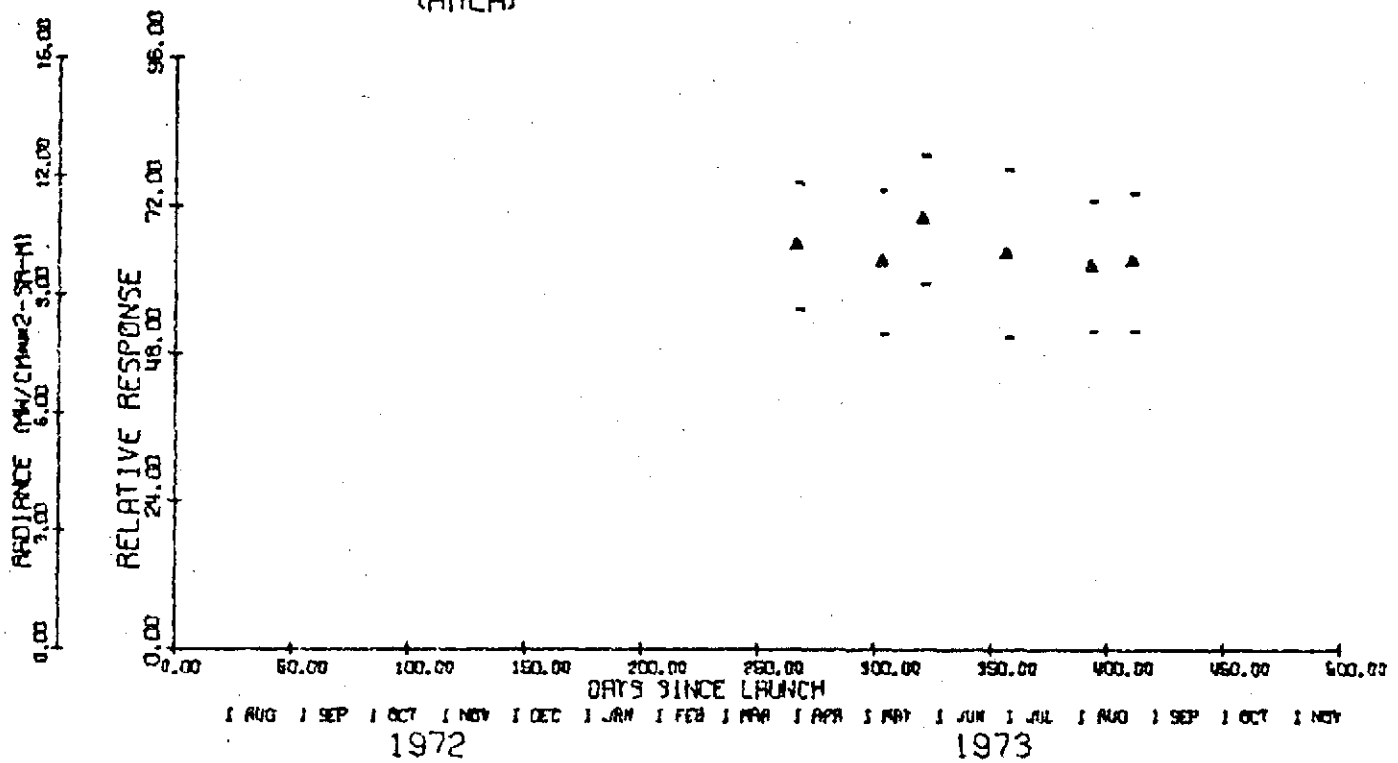
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BAND 7 0.8-1.1 M
COLORADO CITY, AR.
(ALFALFA)



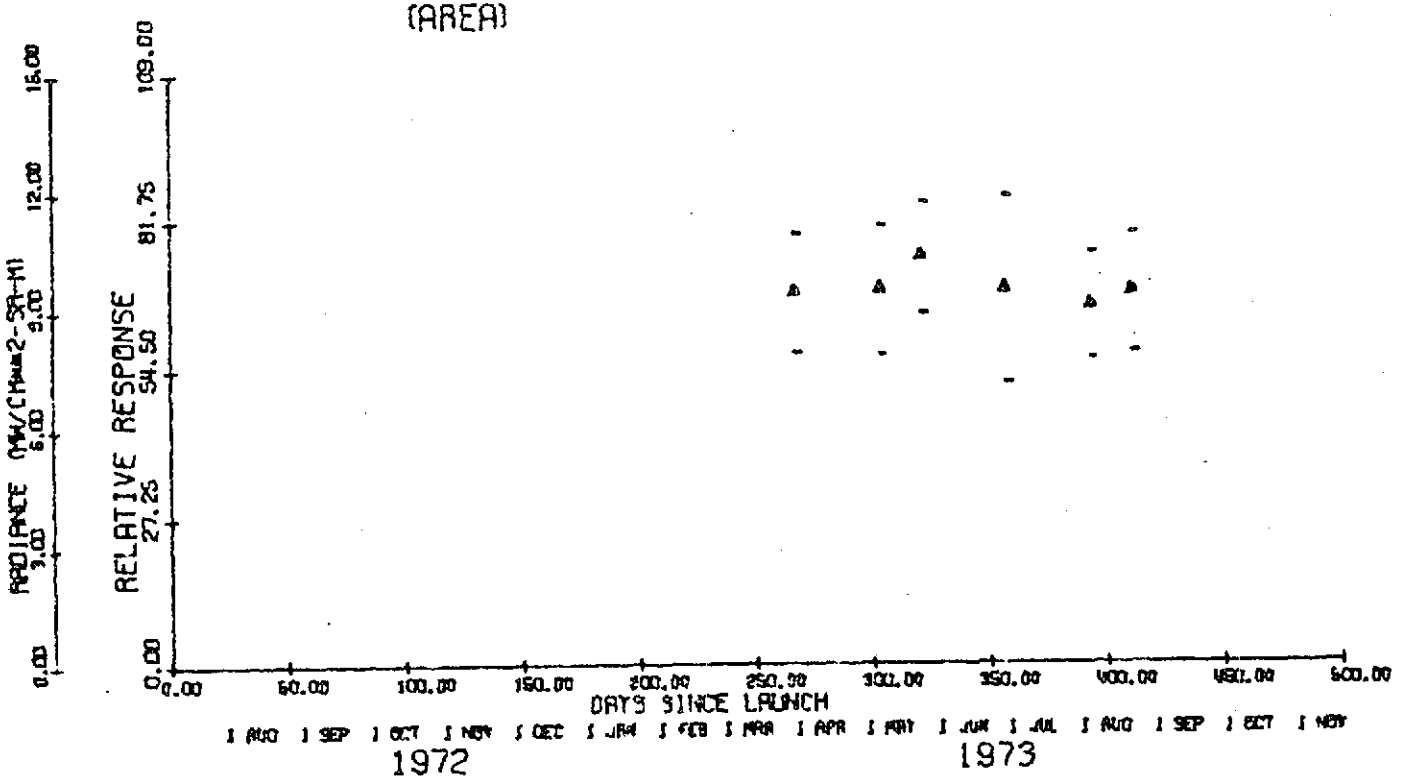
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BAND 4 0.5-0.6 M
COLORADO CITY, AR.
(AREA)



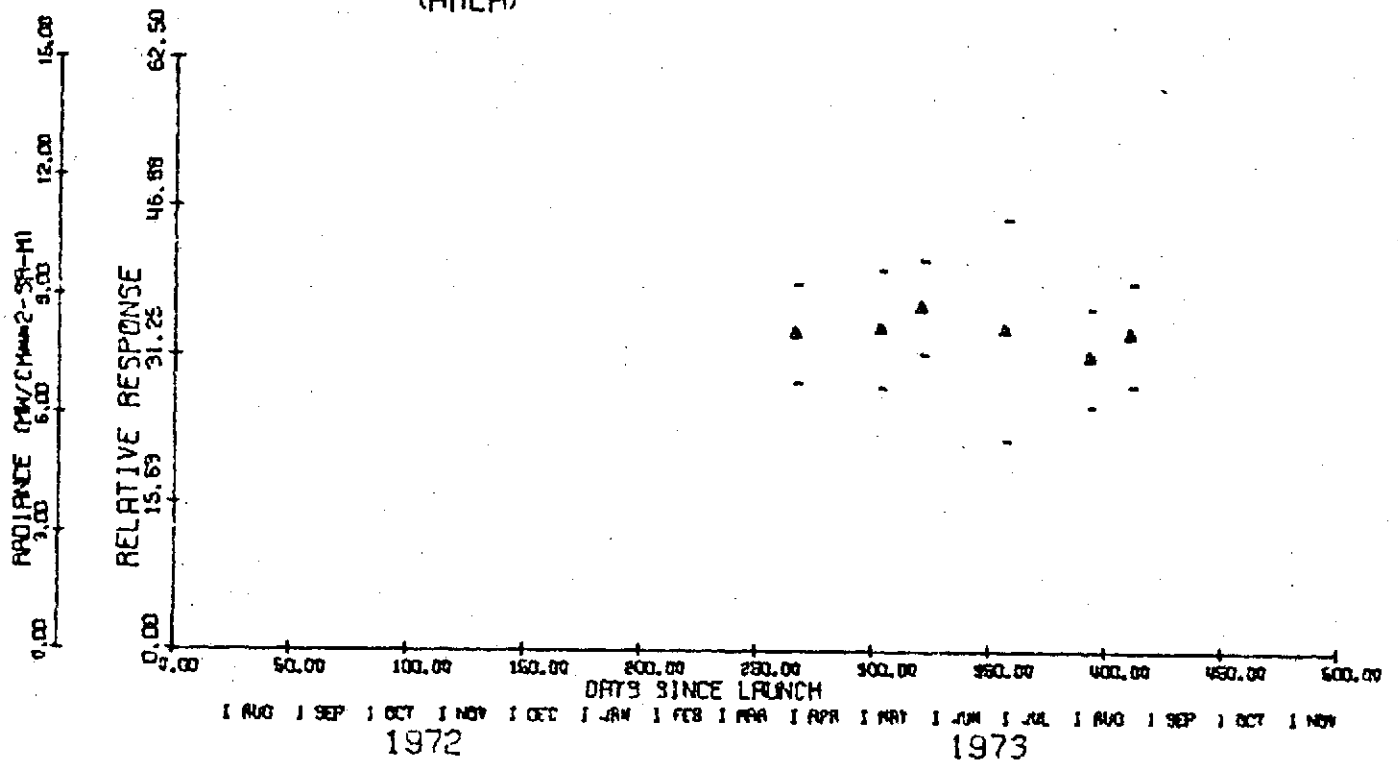
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
COLORADO CITY, AR.
(AREA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
COLORADO CITY,AR.
(AREA)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
COLORADO CITY, AR.
(AREA)



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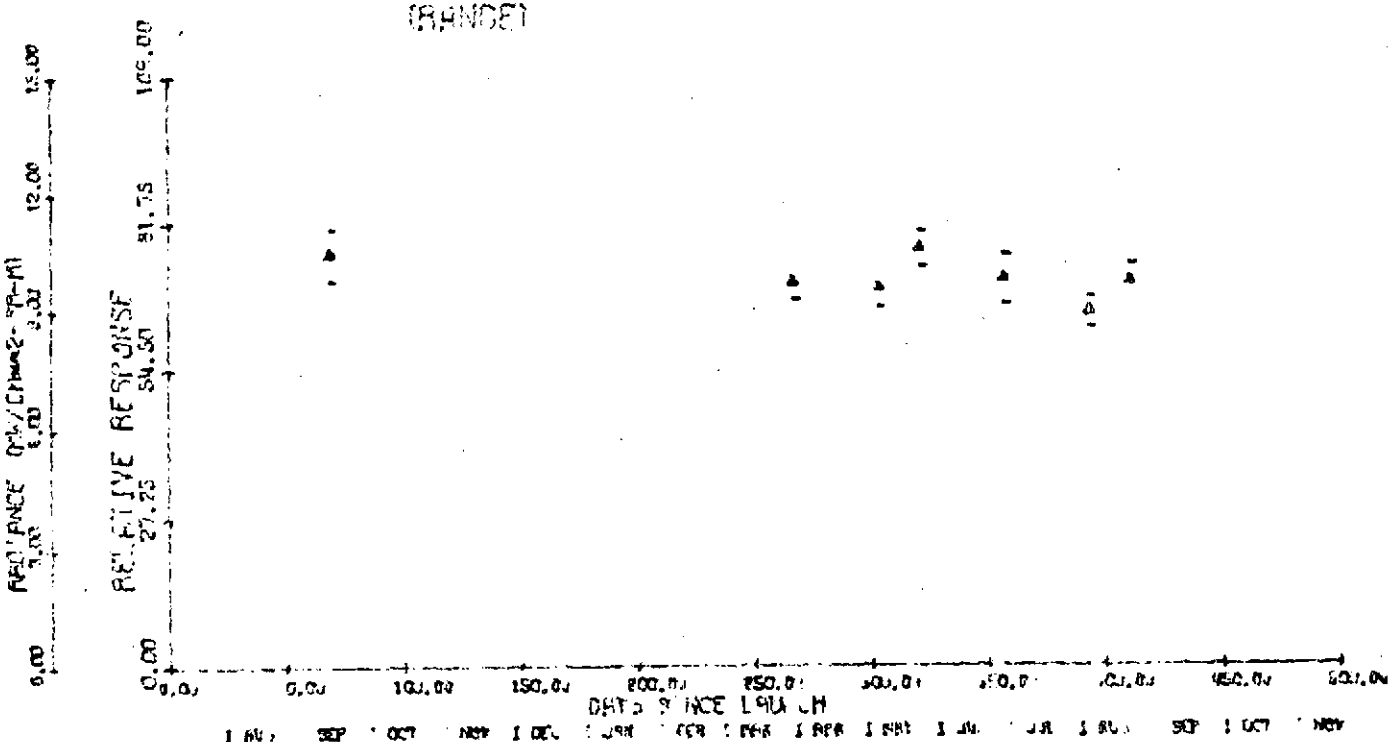
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
COLORADO CITY, AR
(RANGE)

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BAND 5 0.6-0.7 M
COLORADO CITY, AR.
(RANGE)

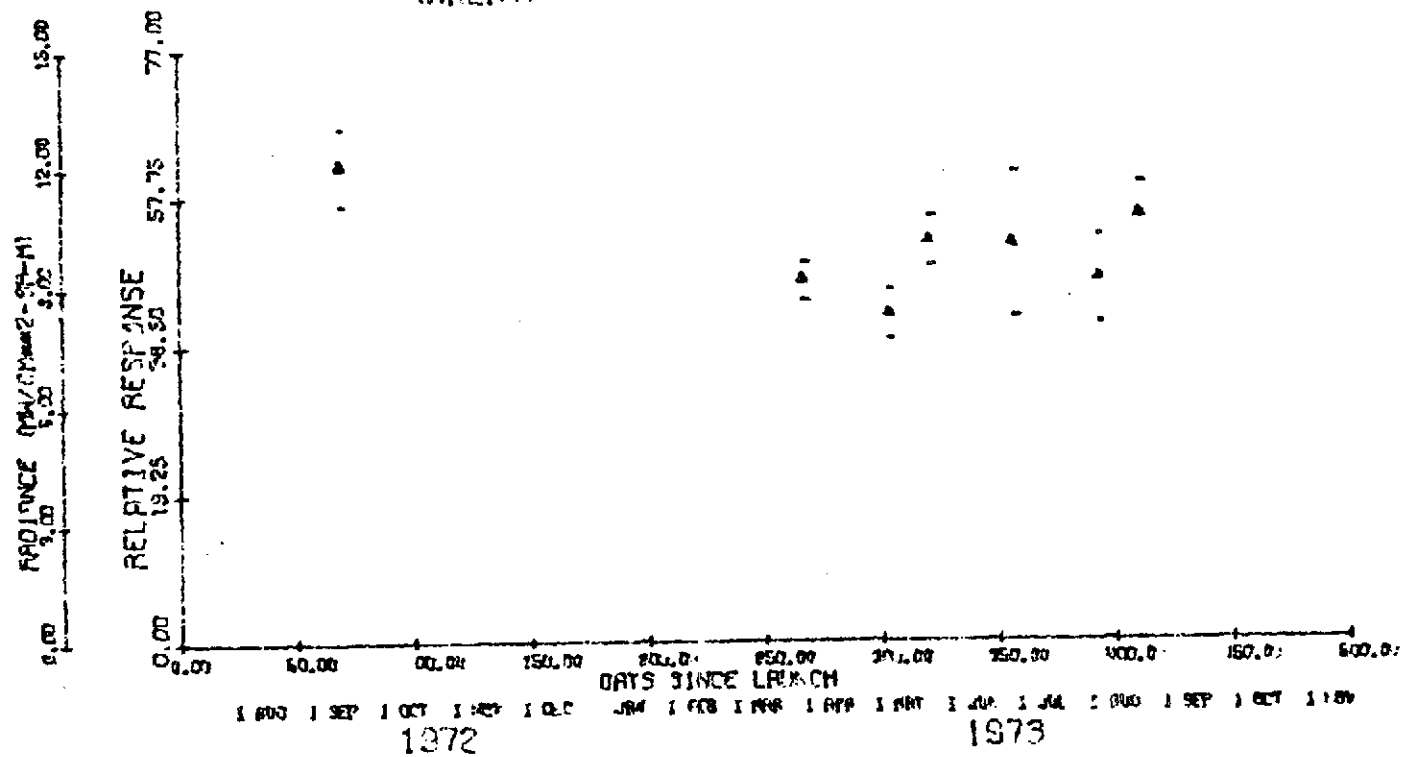
ERTS1 RADIANCE AND
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BAND 6 0.7-0.8 M
COLORADO CITY, AR
(RANGE)



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ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
COLORADO CITY, AR
(RANCE)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
COLORADO CITY, AR.
(WHEAT)

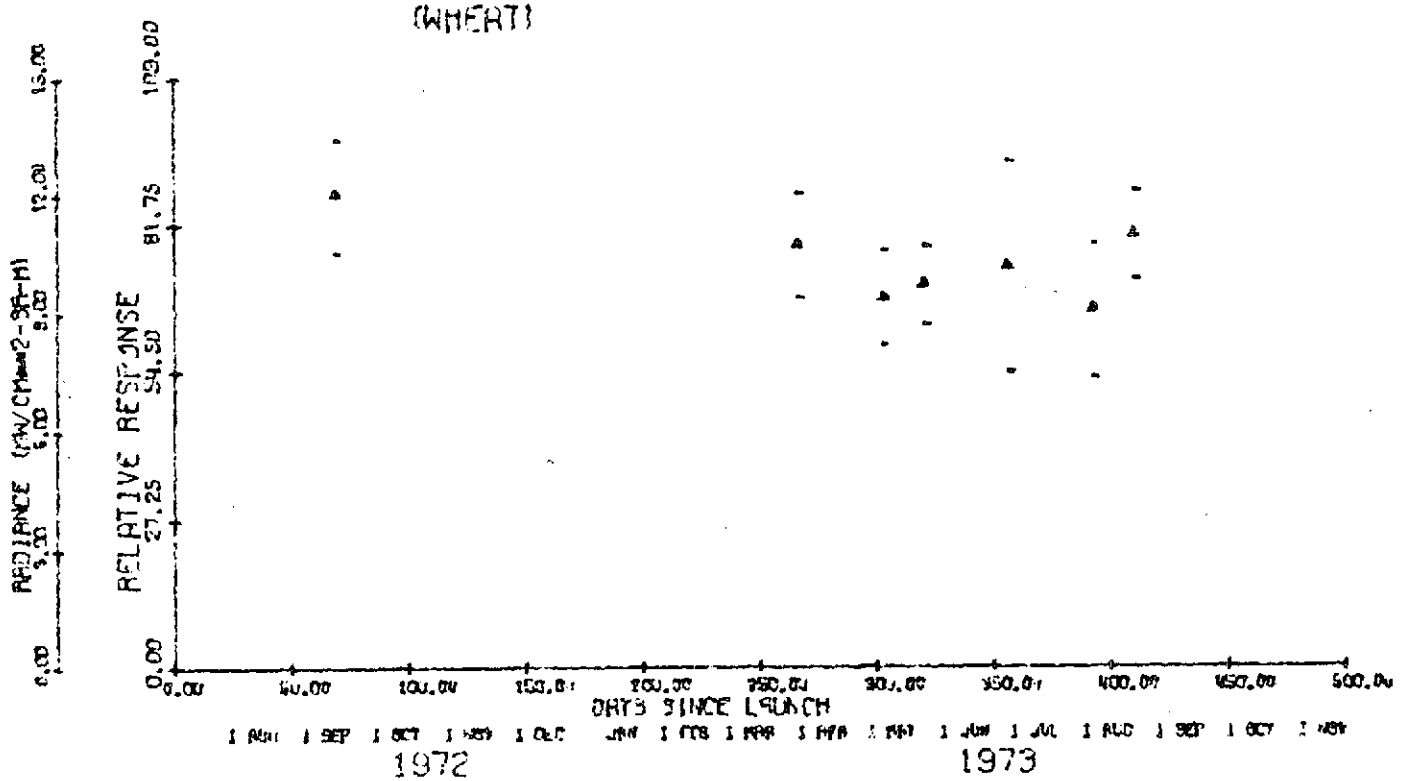


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ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
COLORADO CITY,AR.
(WHEAT)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
COLORADO CITY, AR.
(WHEAT)



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RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
COLORADO CITY,AR.
(WHEAT)

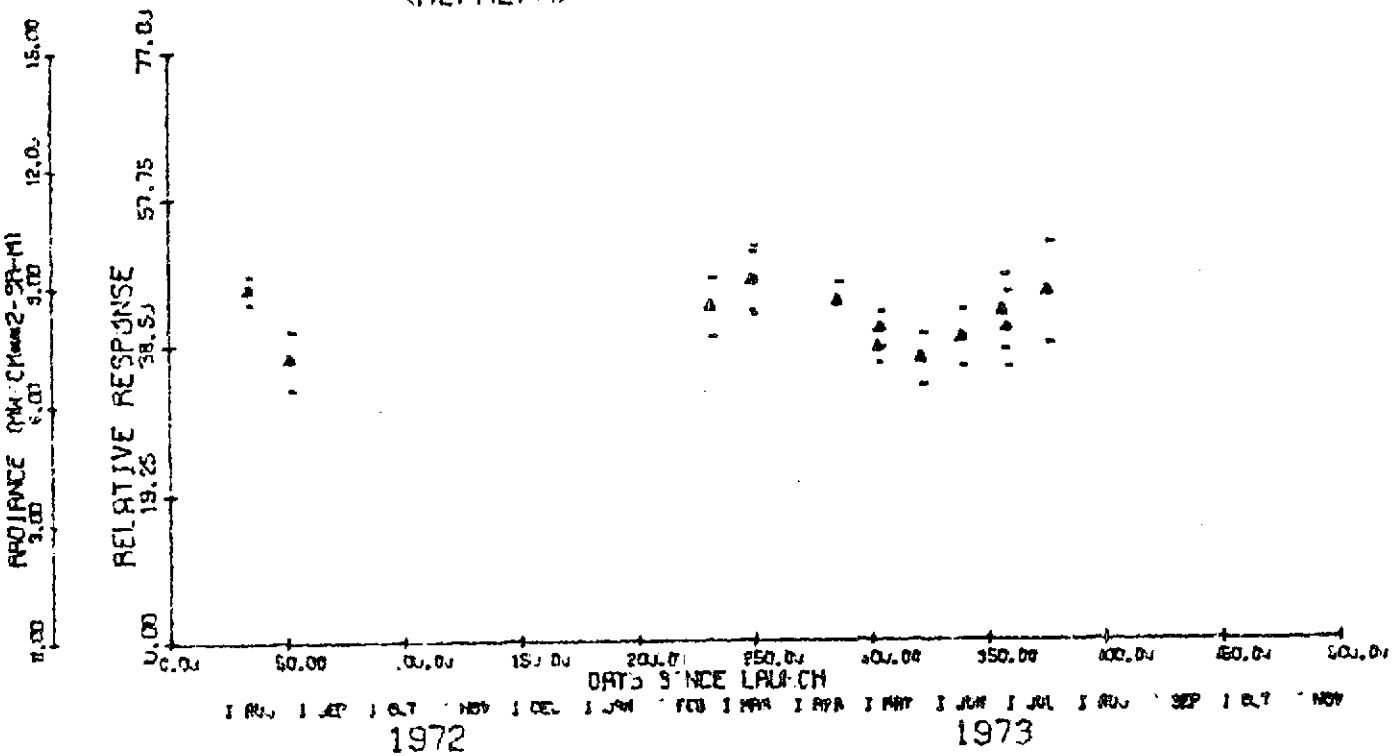
COLUMBIA VALLEY CORRIDOR

Havre, MT
48°27'N, 109°47'W

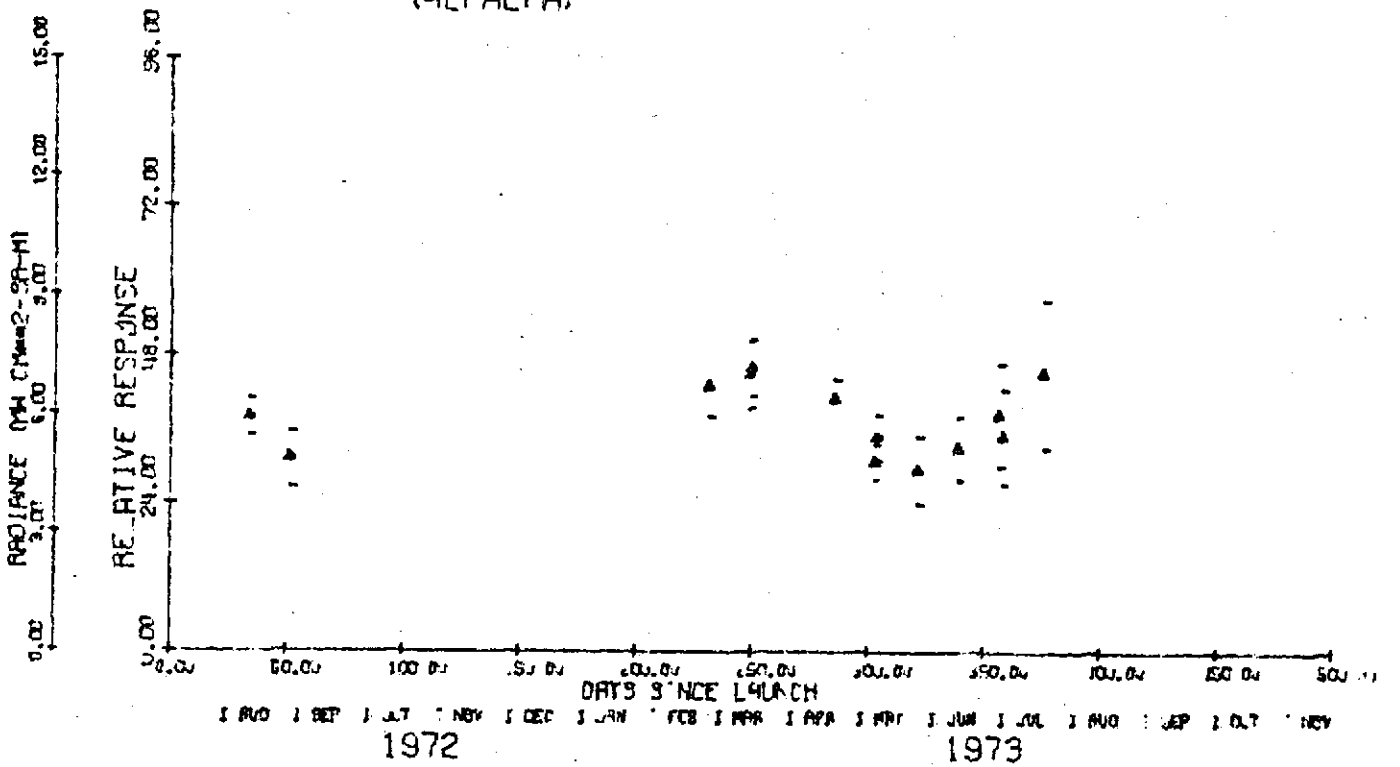


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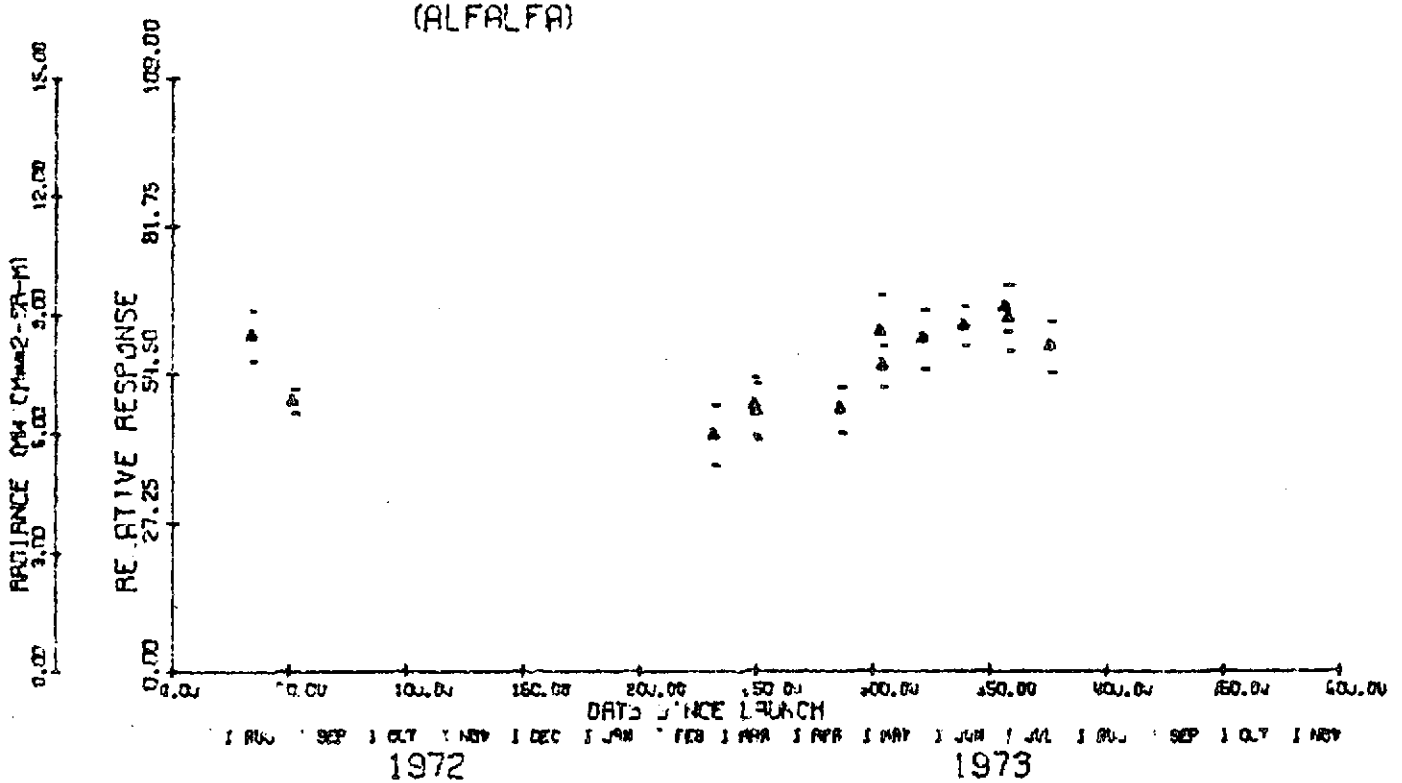
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BAND 4 0.5-0.6 M
HAVRE, MT.
(ALFALFA)



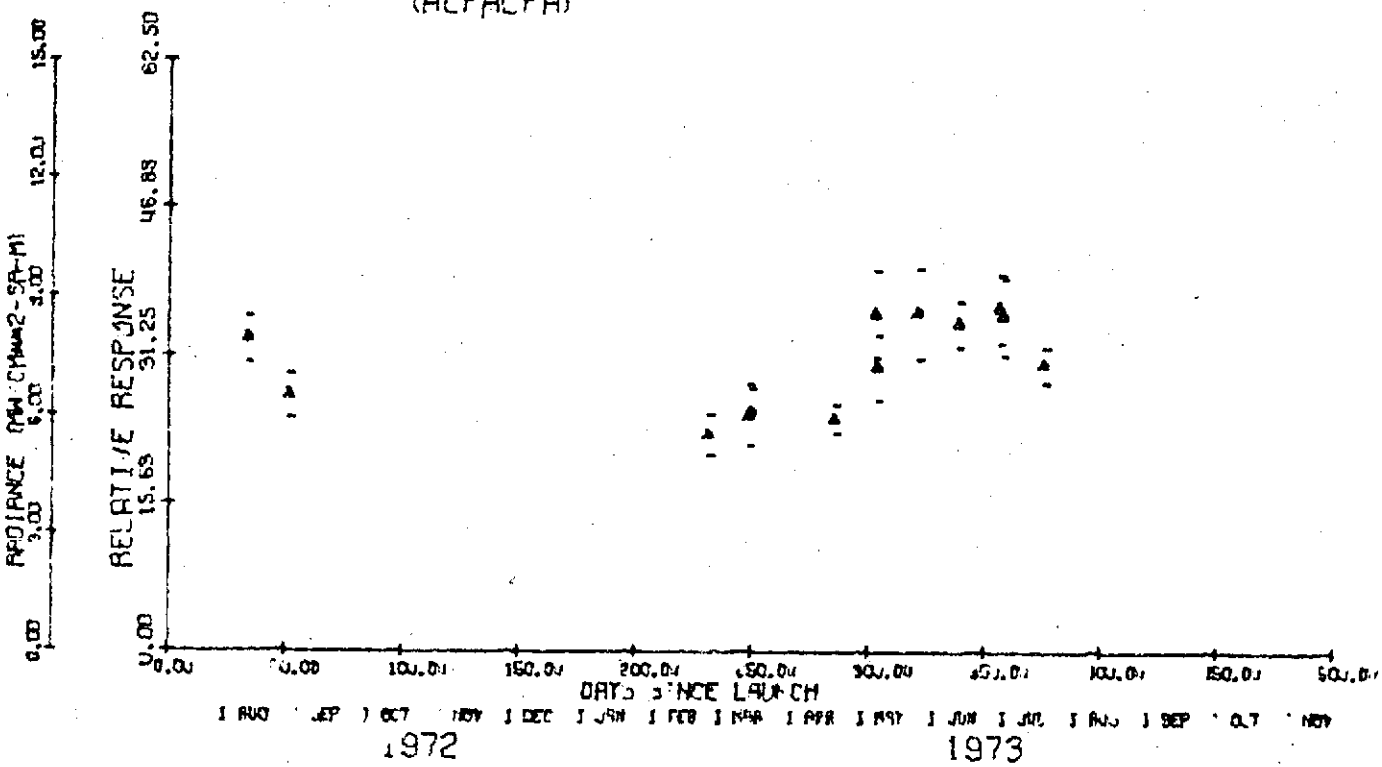
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BAND 5 0.6-0.7 M
HAVRE, MT
(ALFALFA)



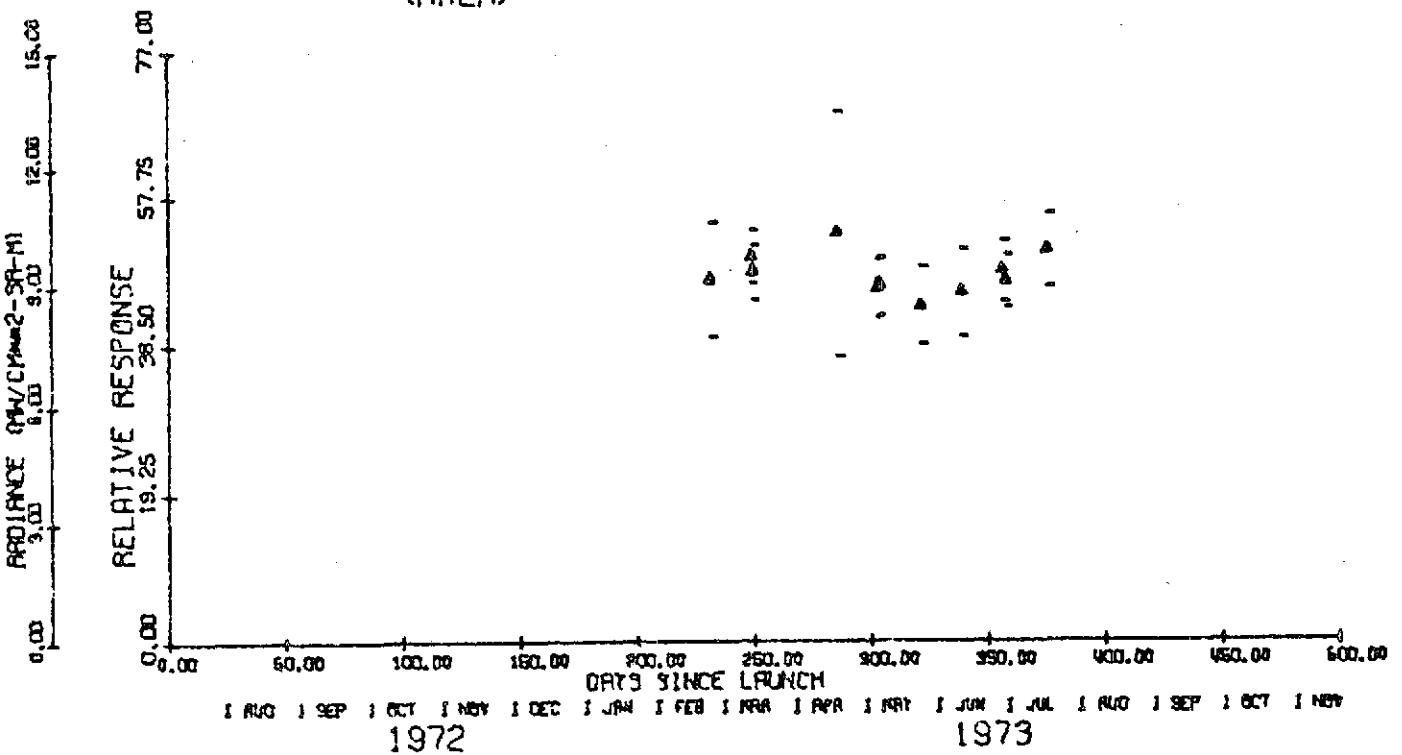
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BAND 6 0.7-0.8 M
HAVRE, MT
(ALFALFA)



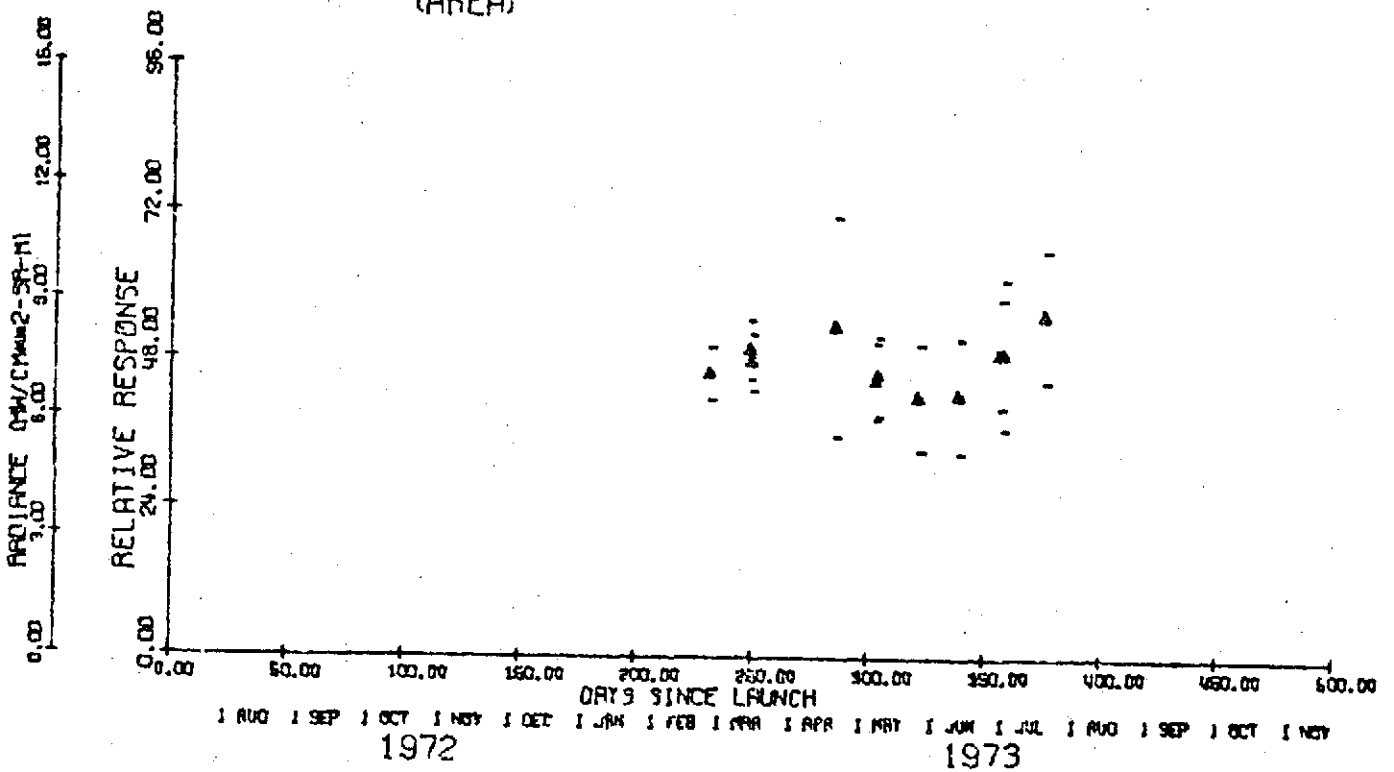
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BAND 7 0.8-1.1 M
HAVRE, MT.
(ALFALFA)



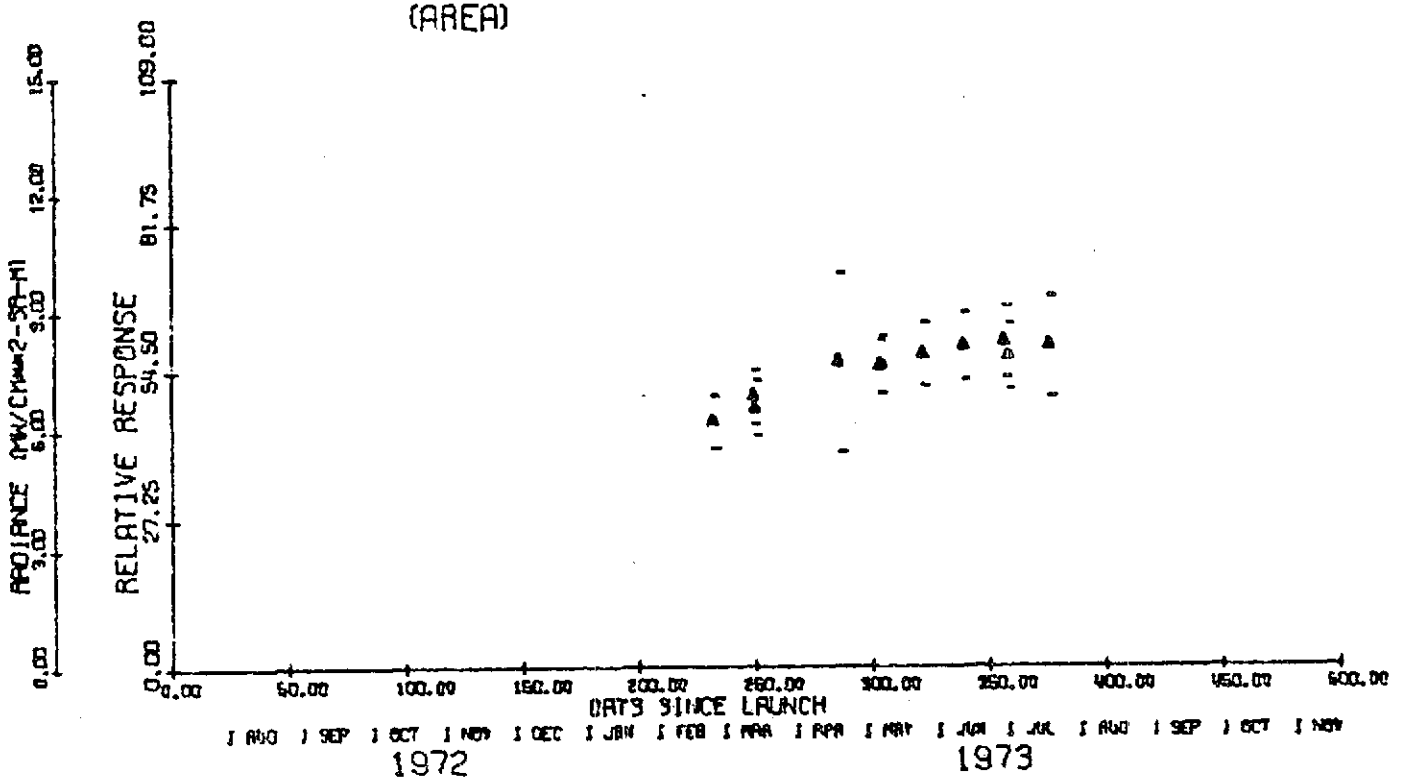
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BAND 4 0.5-0.6 M
HAVRE, MT.
(AREA)



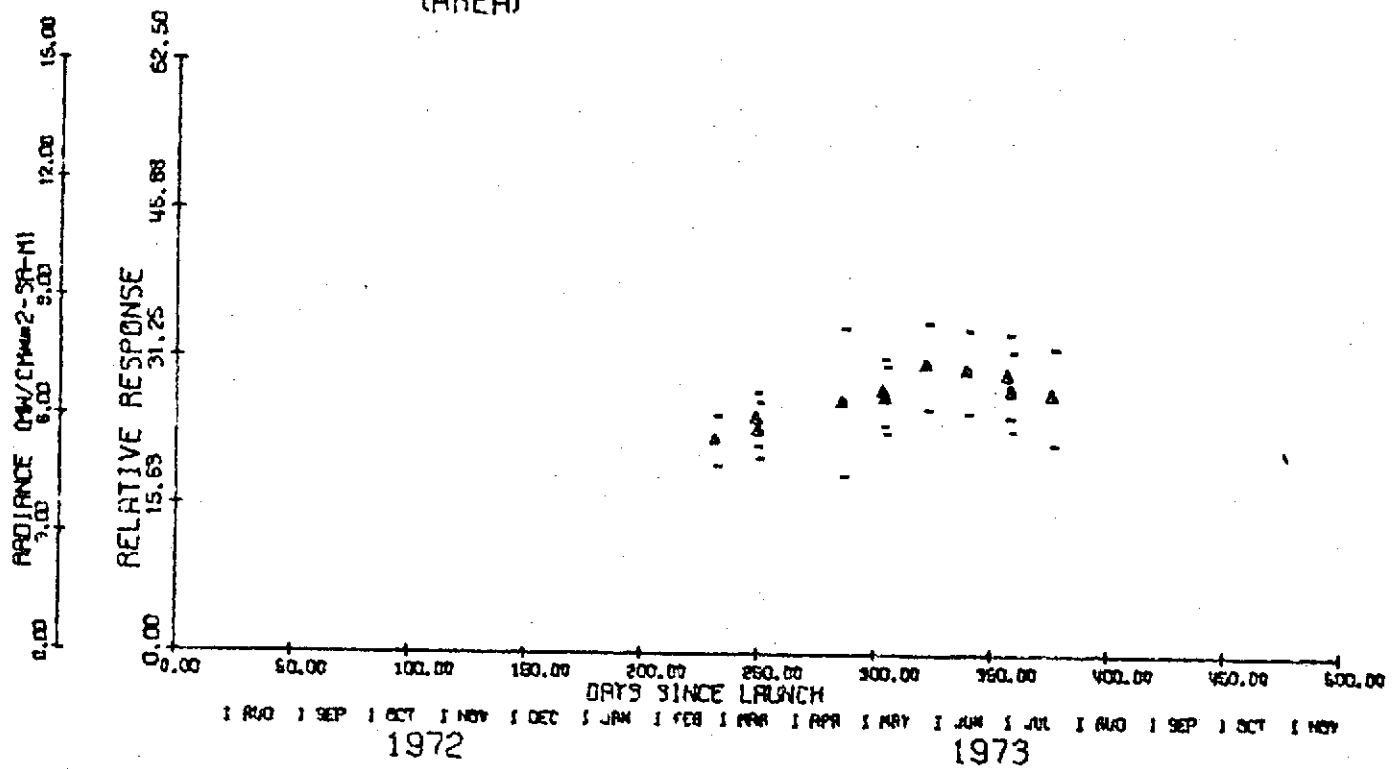
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HAVRE, MT.
(AREA)



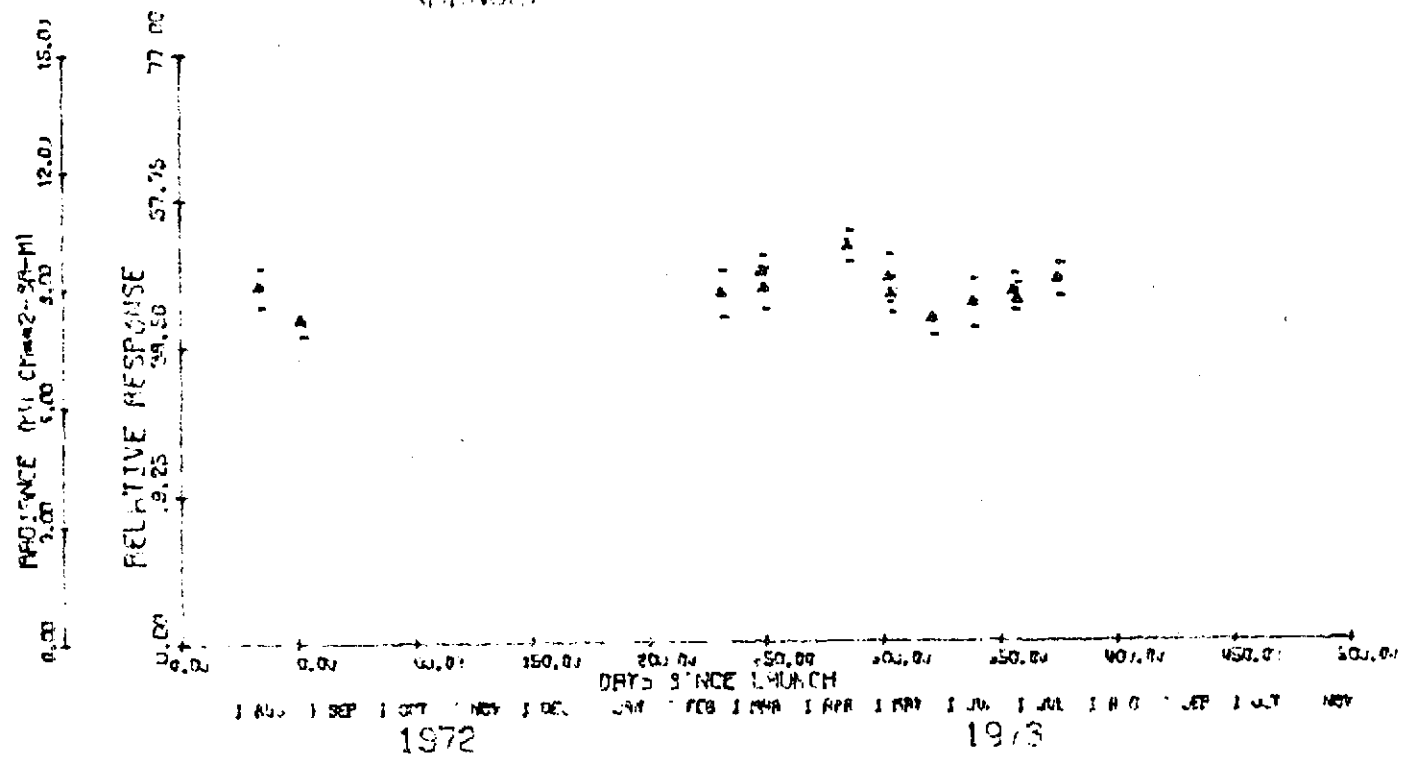
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BAND 6 0.7-0.8 M
HAVRE, MT.
(AREA)



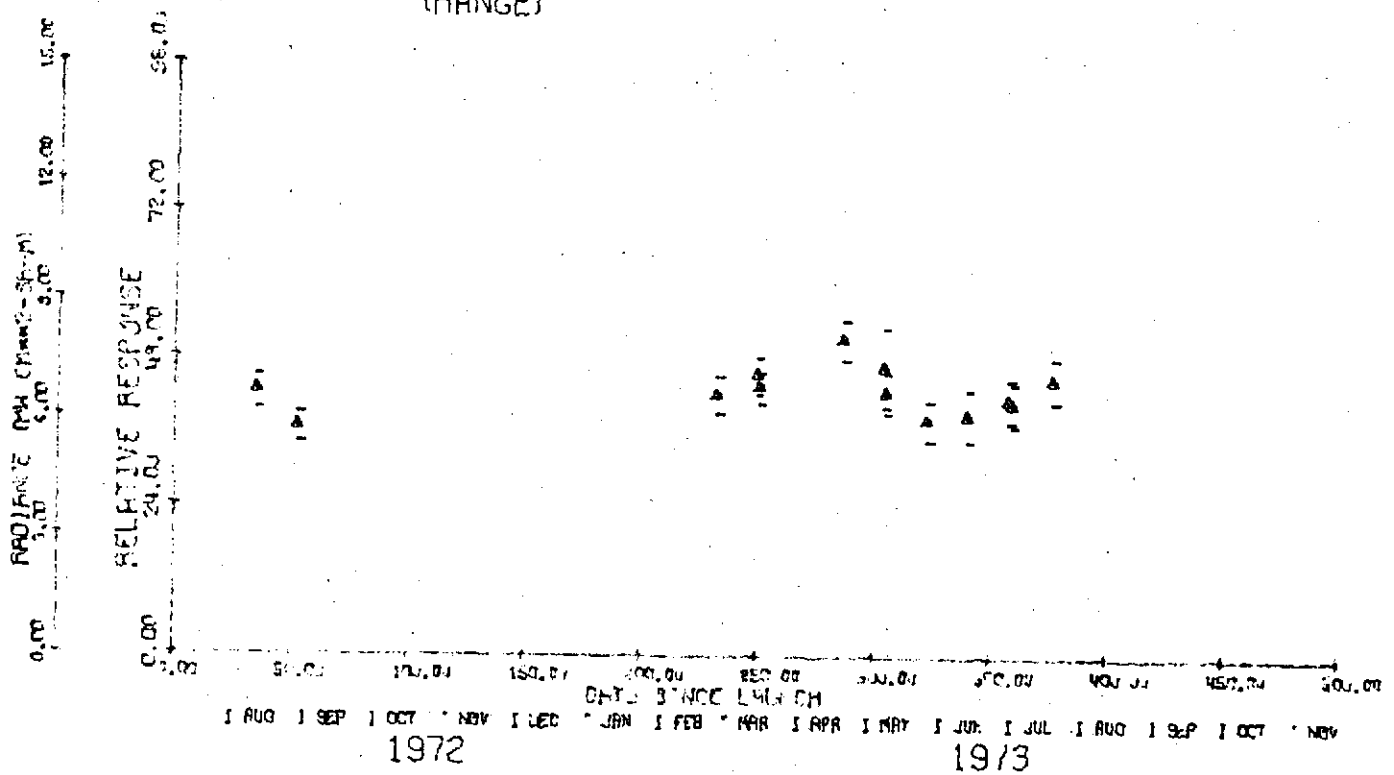
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BAND 7 0.8-1.1 M
HAVRE, MT.
(AREA)



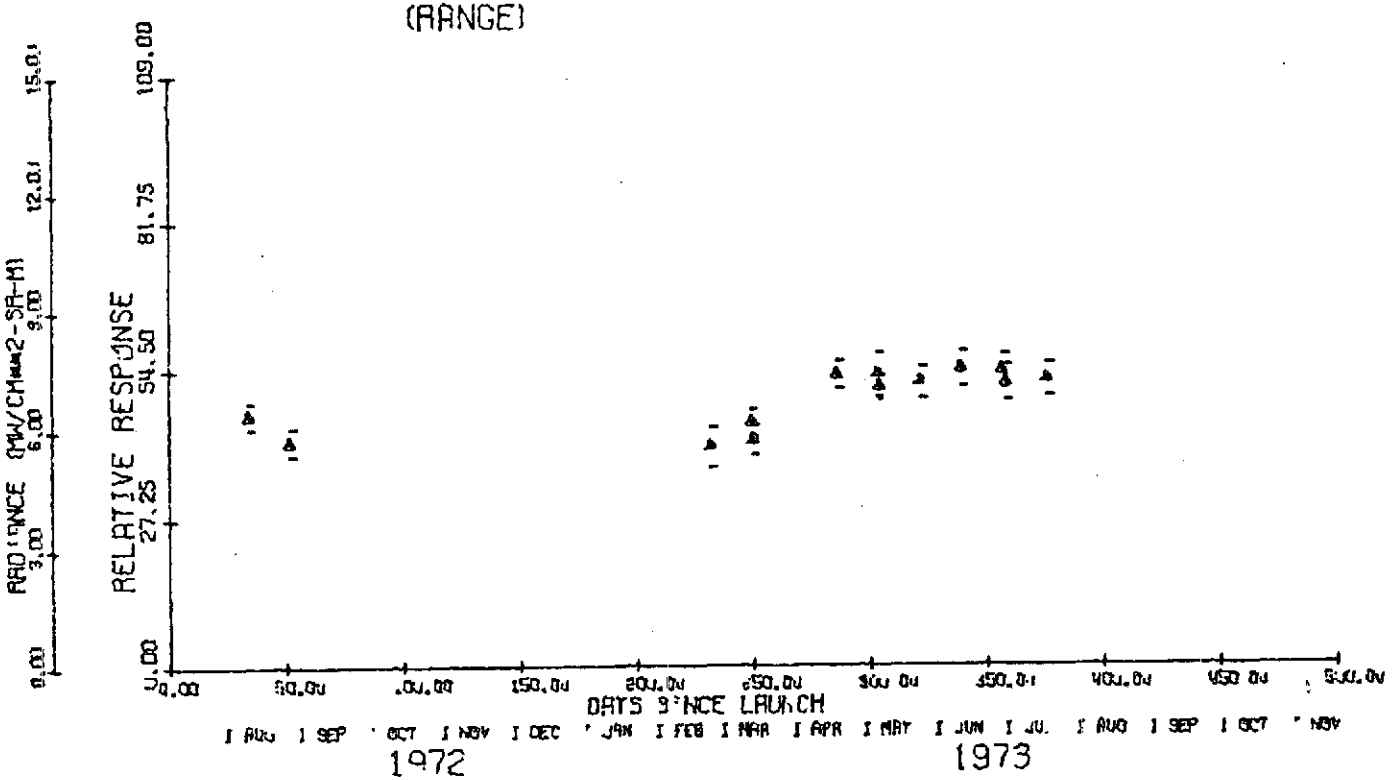
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RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
HAVRE, MT.
(RANGE)



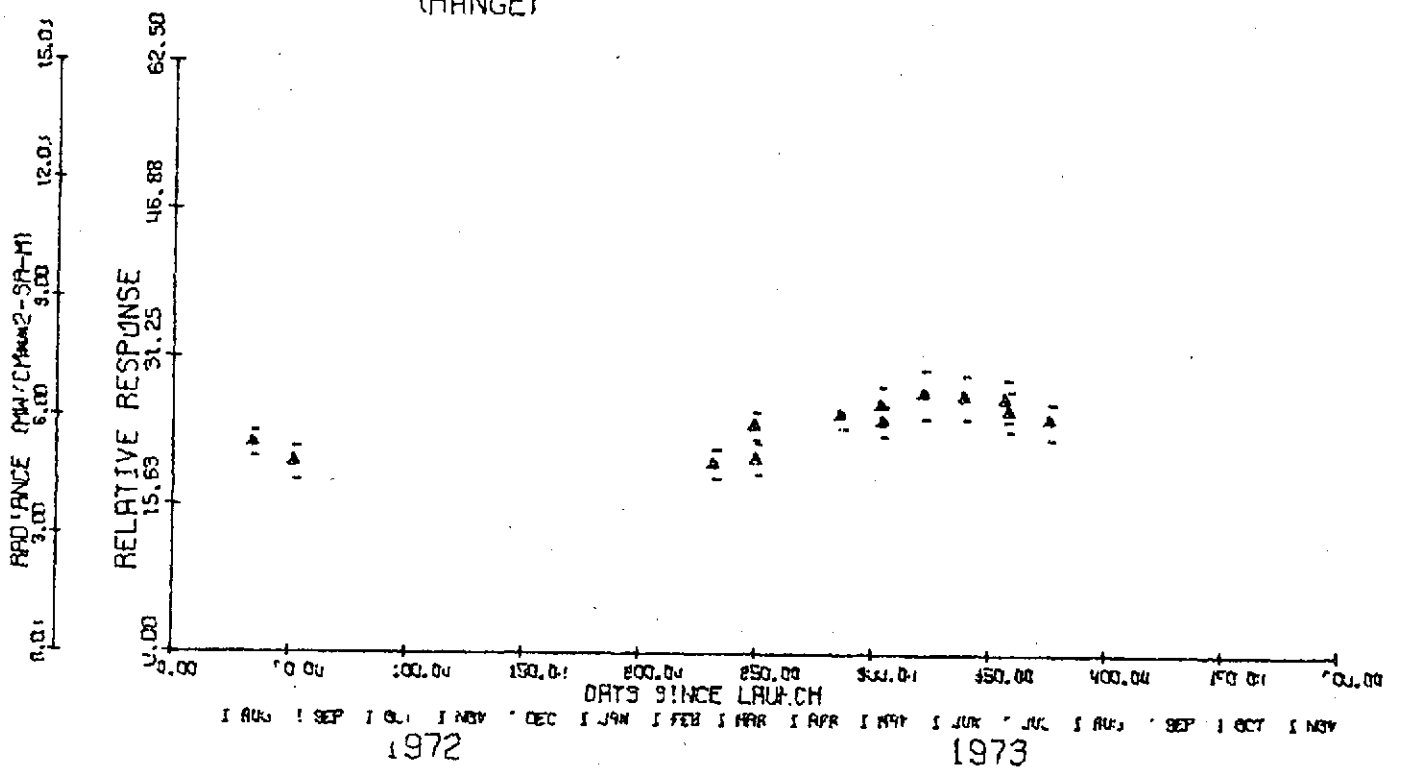
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
HAVRE, MT
(RANGE)



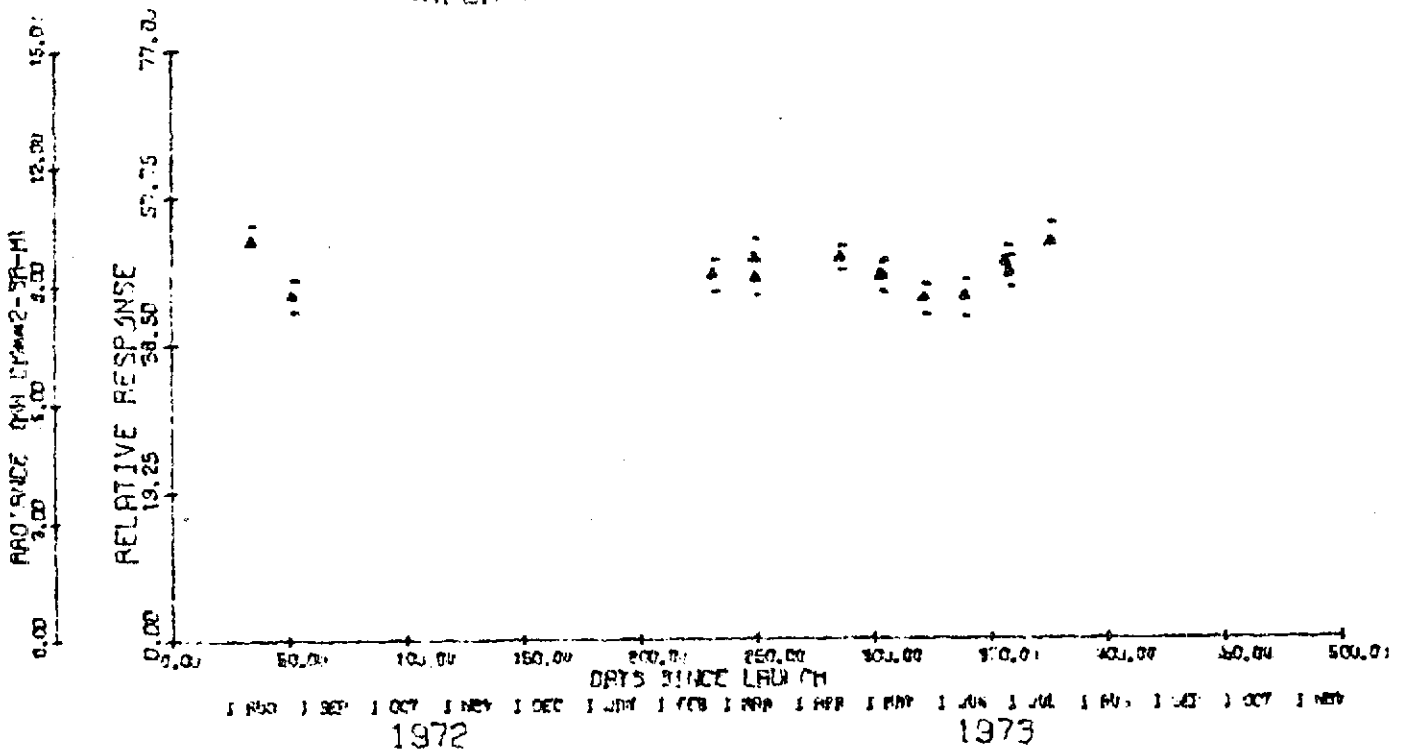
ERTS1 RADIANCE AND
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BAND 6 0.7-0.8 M
HAVRE, MT.
(RANGE)



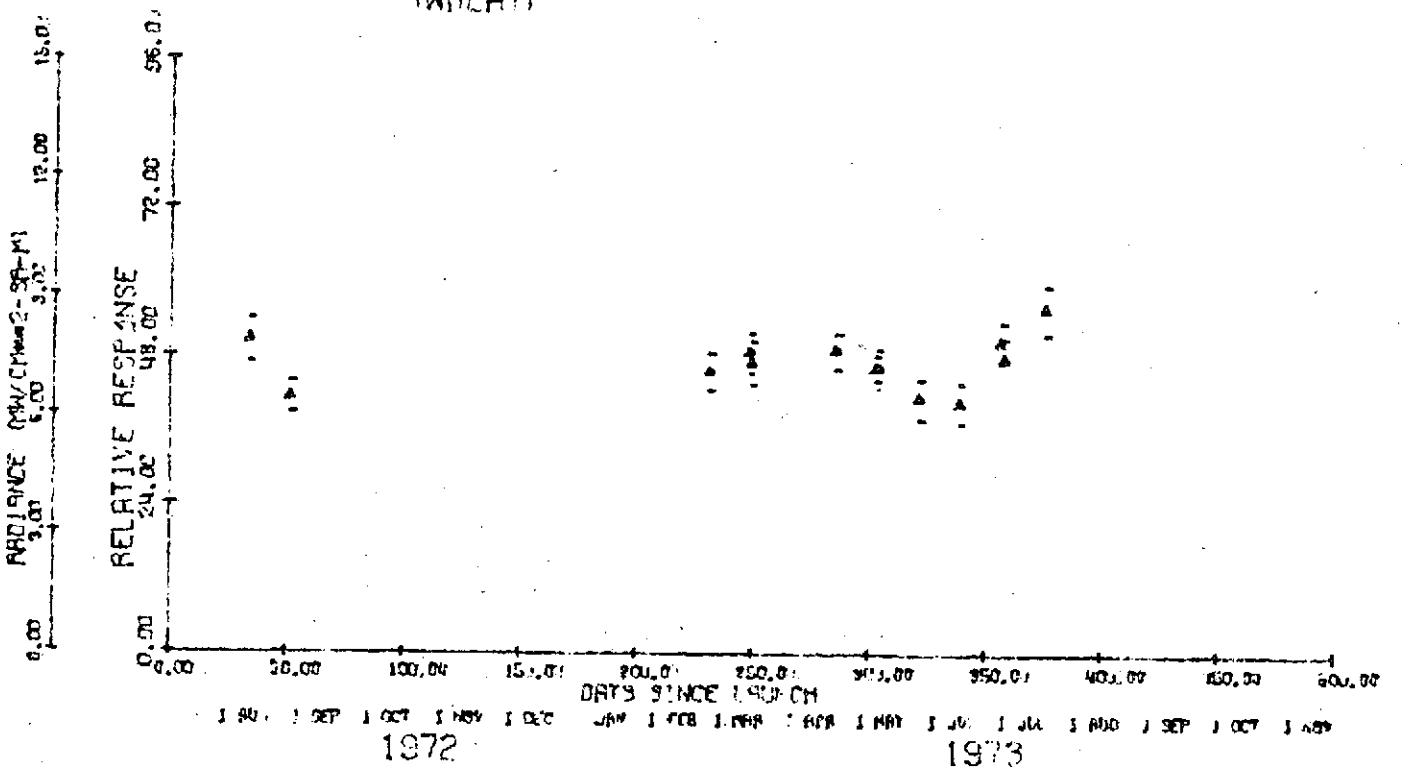
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
HAVRE, MT.
(RANGE)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
HAVRE, MT.
(WHEAT)

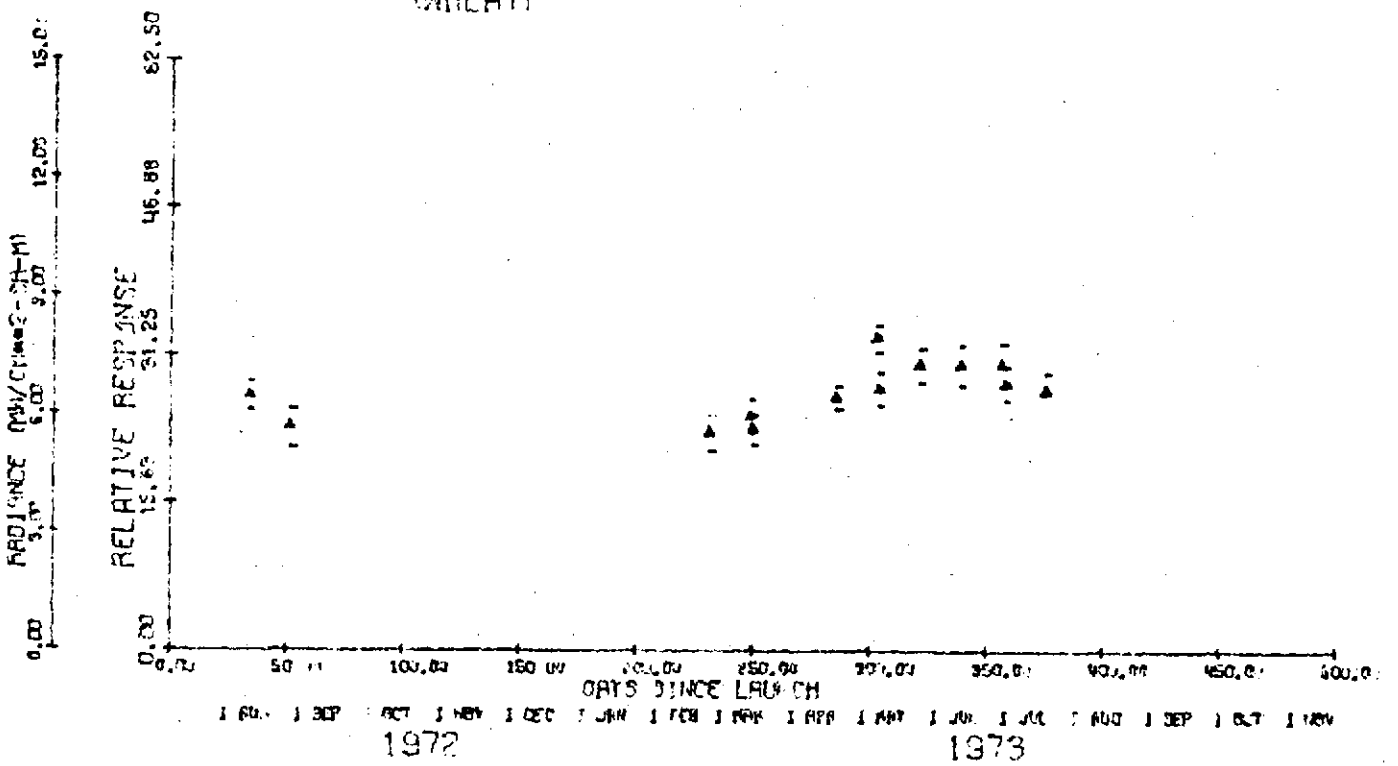


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
HAVRE, MT.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
HAVRE, MT.
(WHEAT)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
HAVRE, MT.
(WHEAT)



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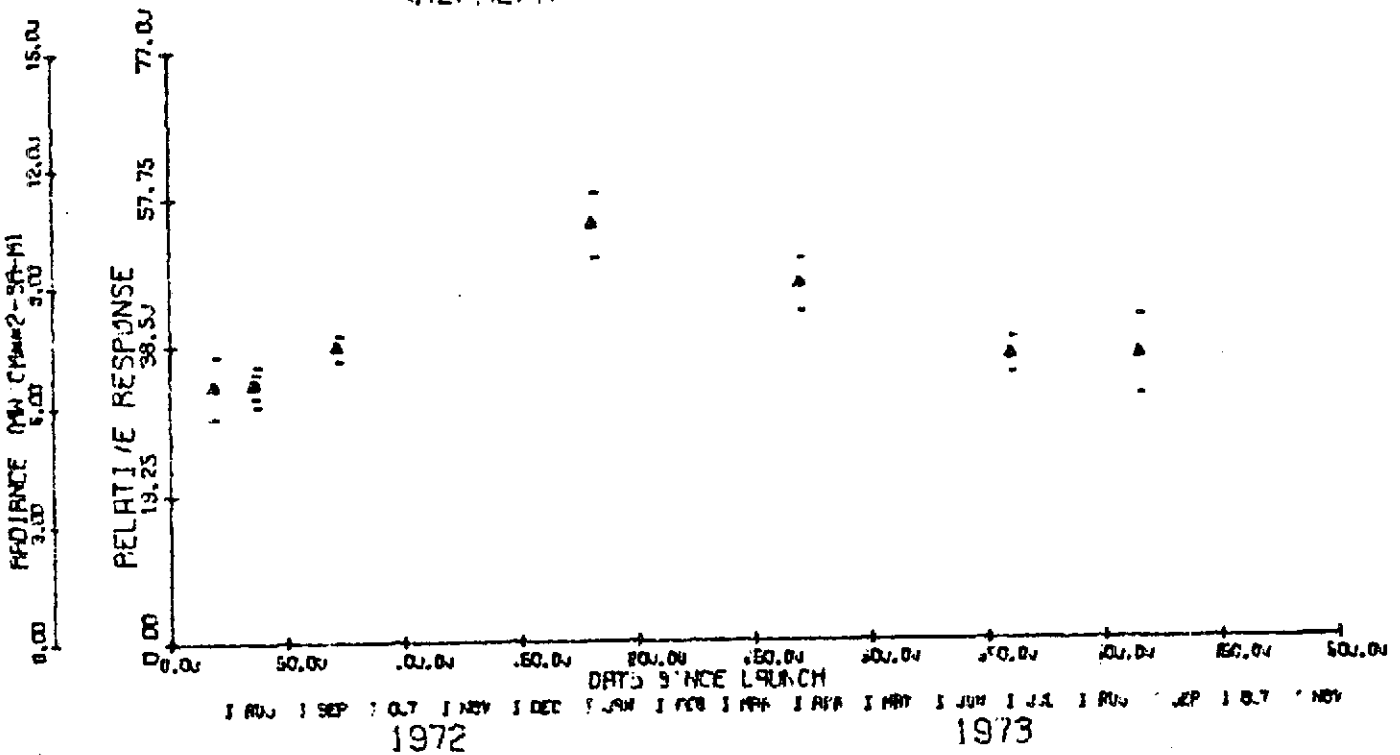
COLUMBIA VALLEY CORRIDOR

Charlo, MT
47°27'N, 114°09'W

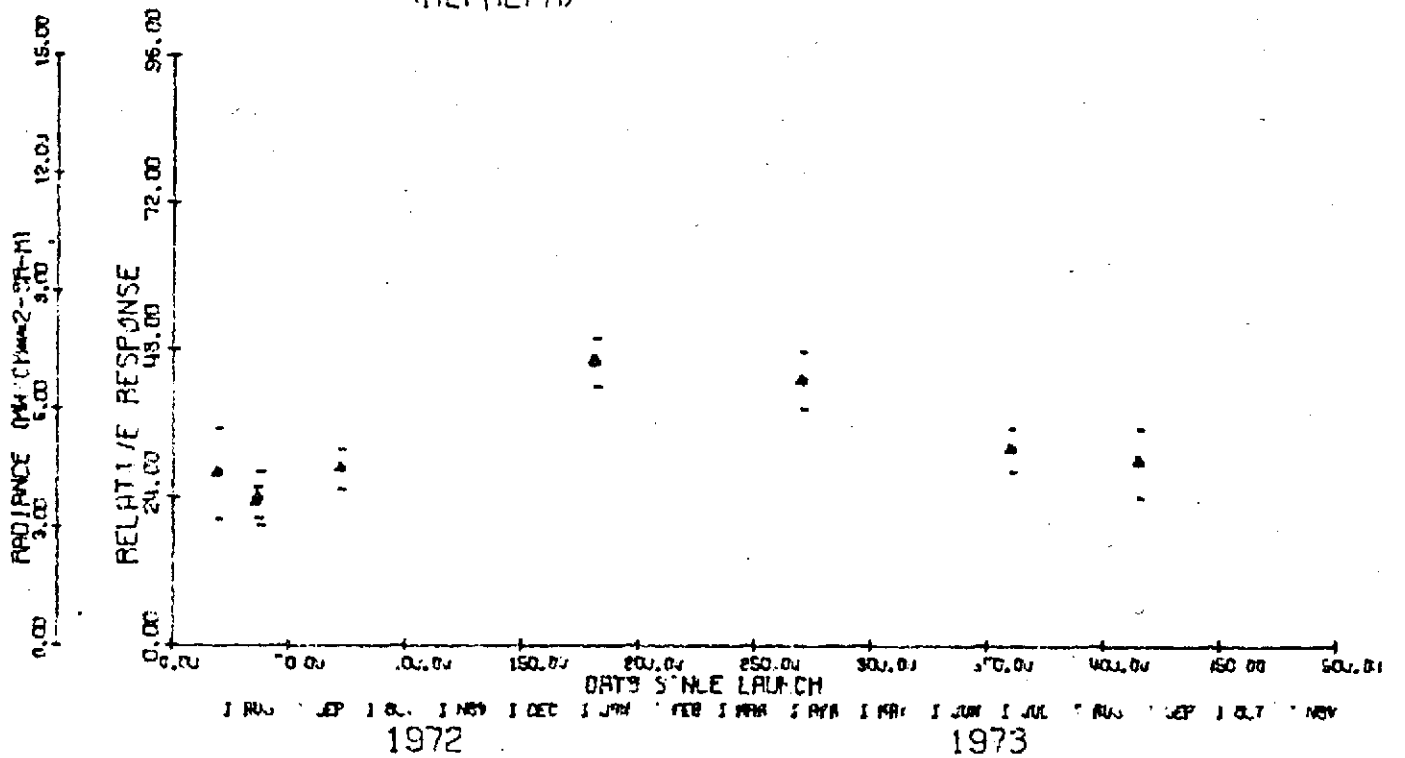


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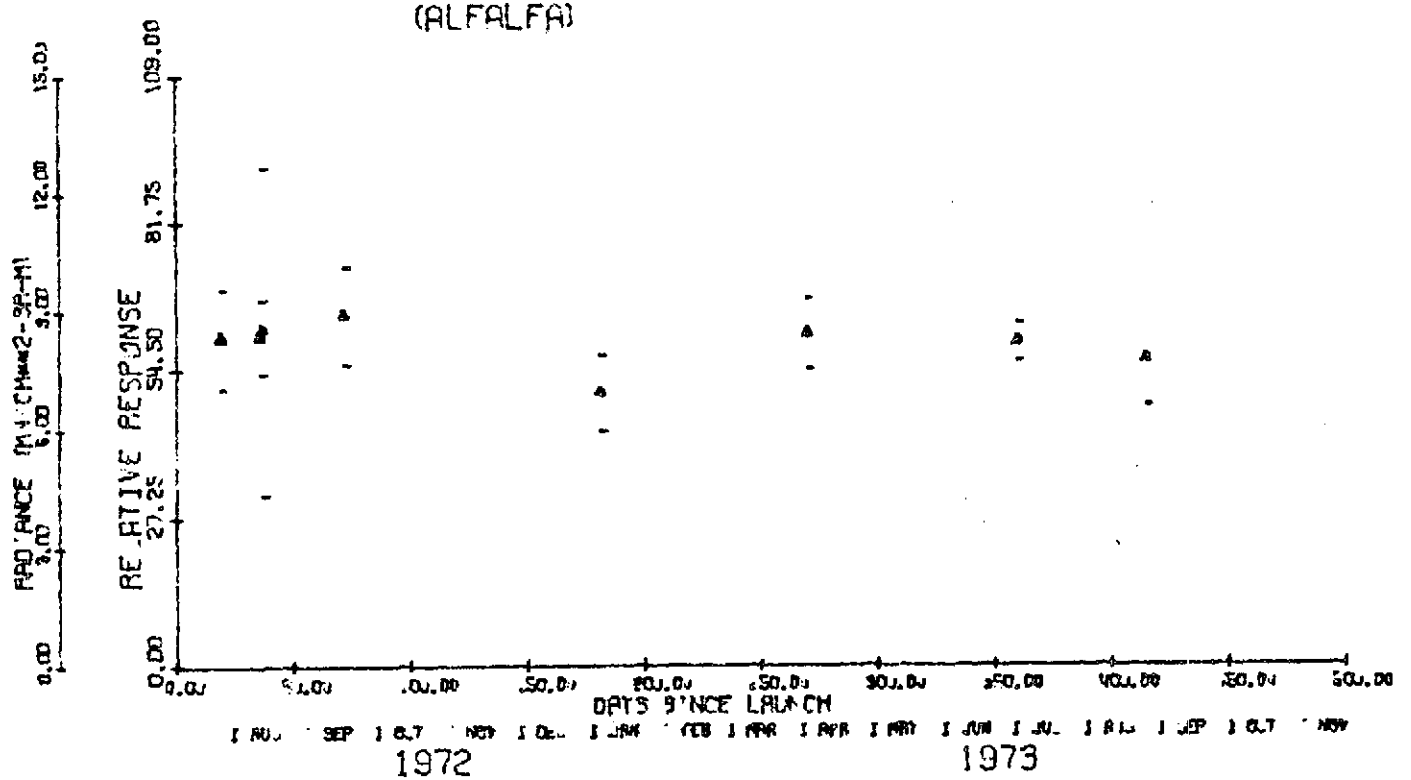
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BAND 4 0.5-0.6 M
CHARLO, MT.
(ALFALFA)



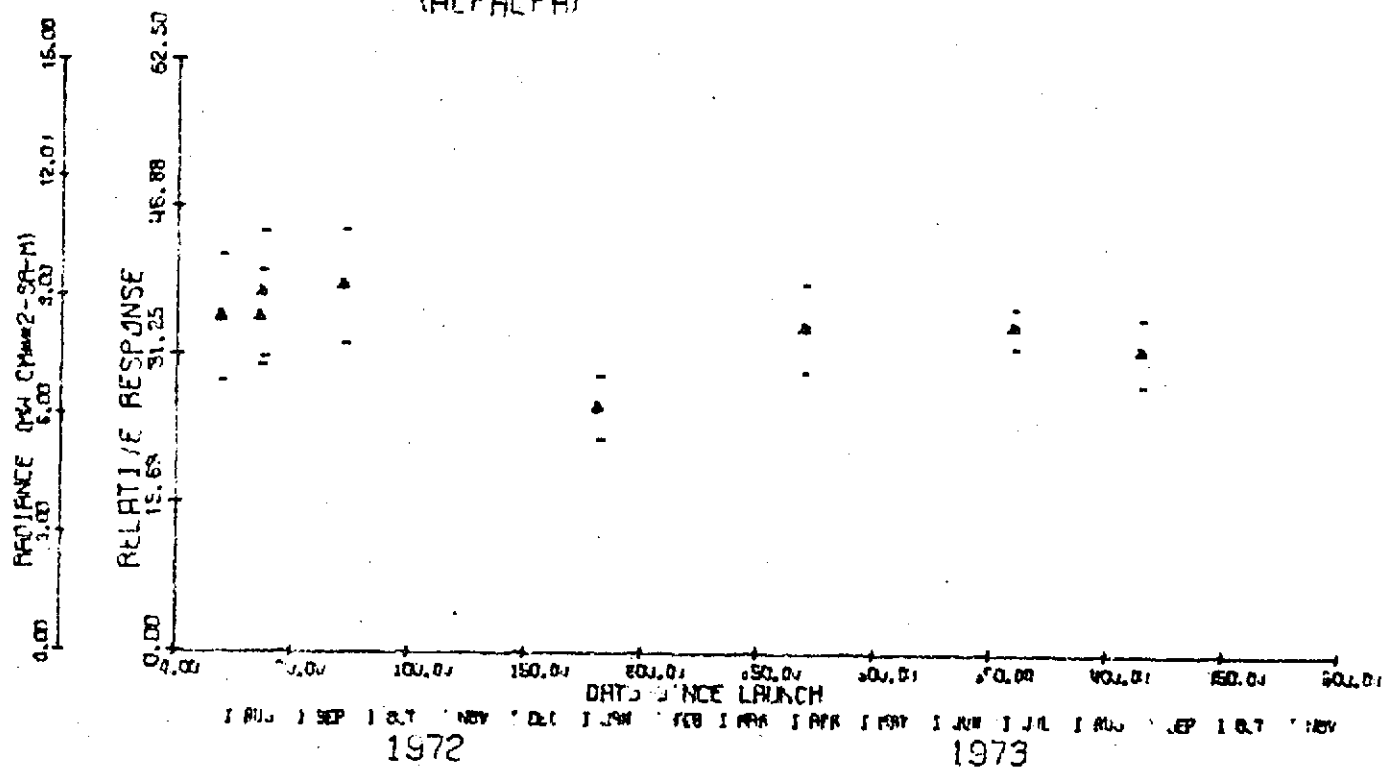
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BAND 5 0.6-0.7 M
CHARLO,MT
(ALFALFA)



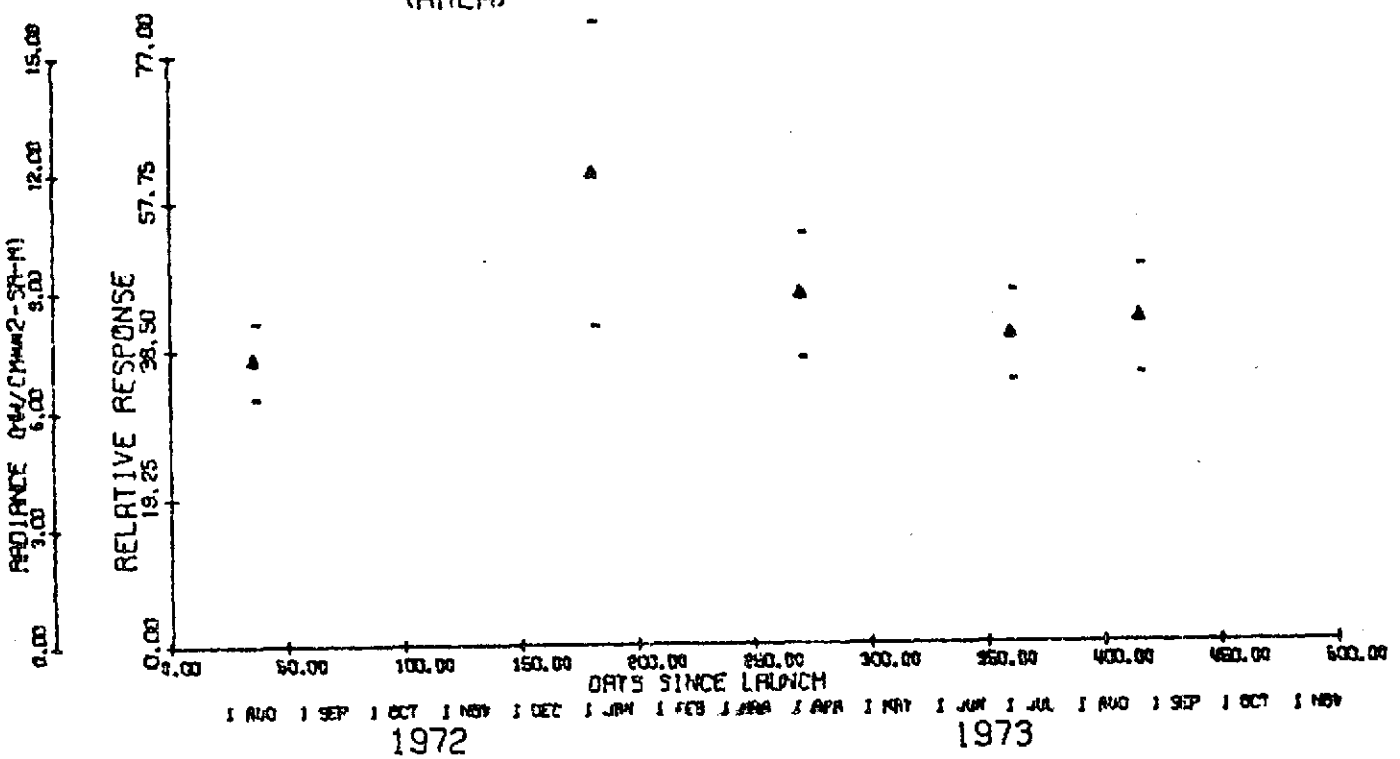
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RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
CHARLO, MT.
(ALFALFA)



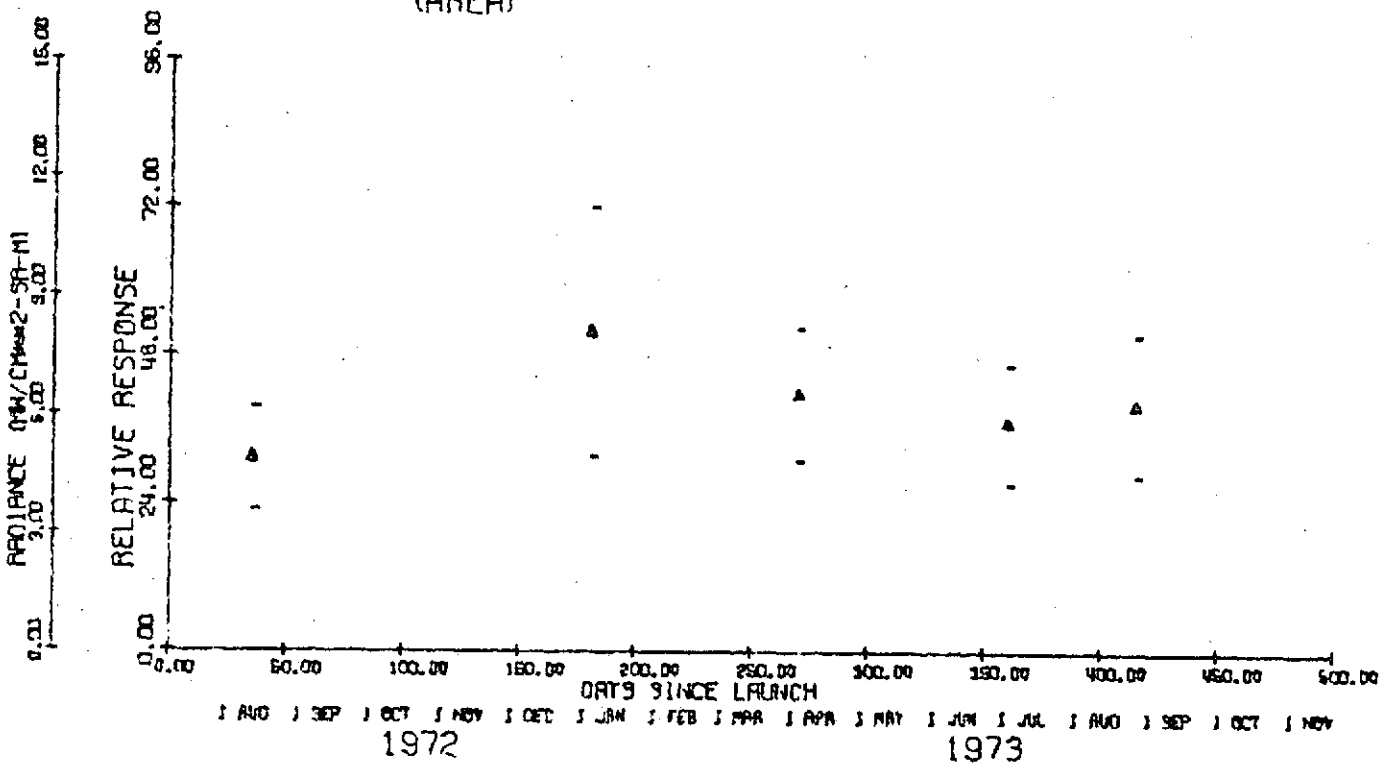
ERTS1 RADIANCE AND
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BAND 7 0.8-1.1 M
CHARLO, MT
(ALFALFA)



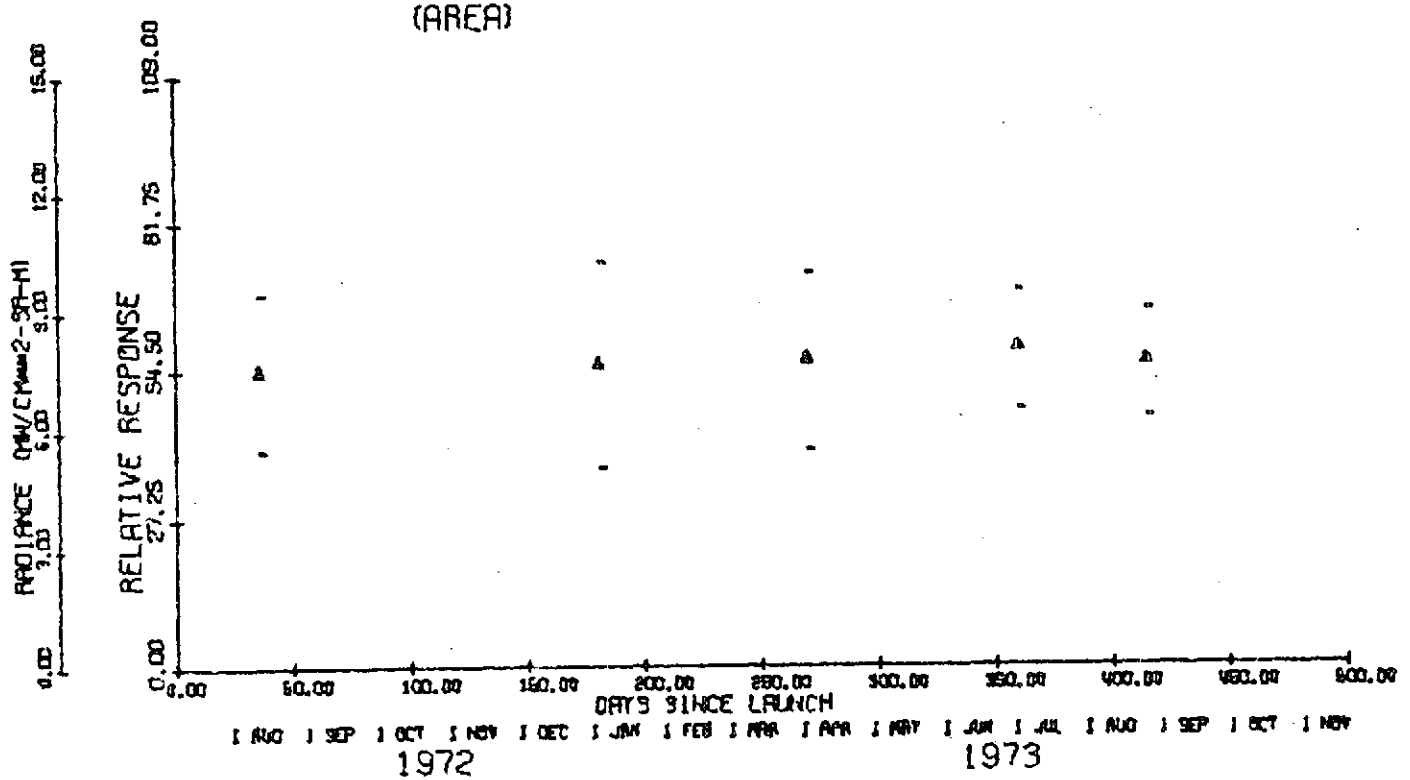
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
CHARLO, MT.
(AREA)



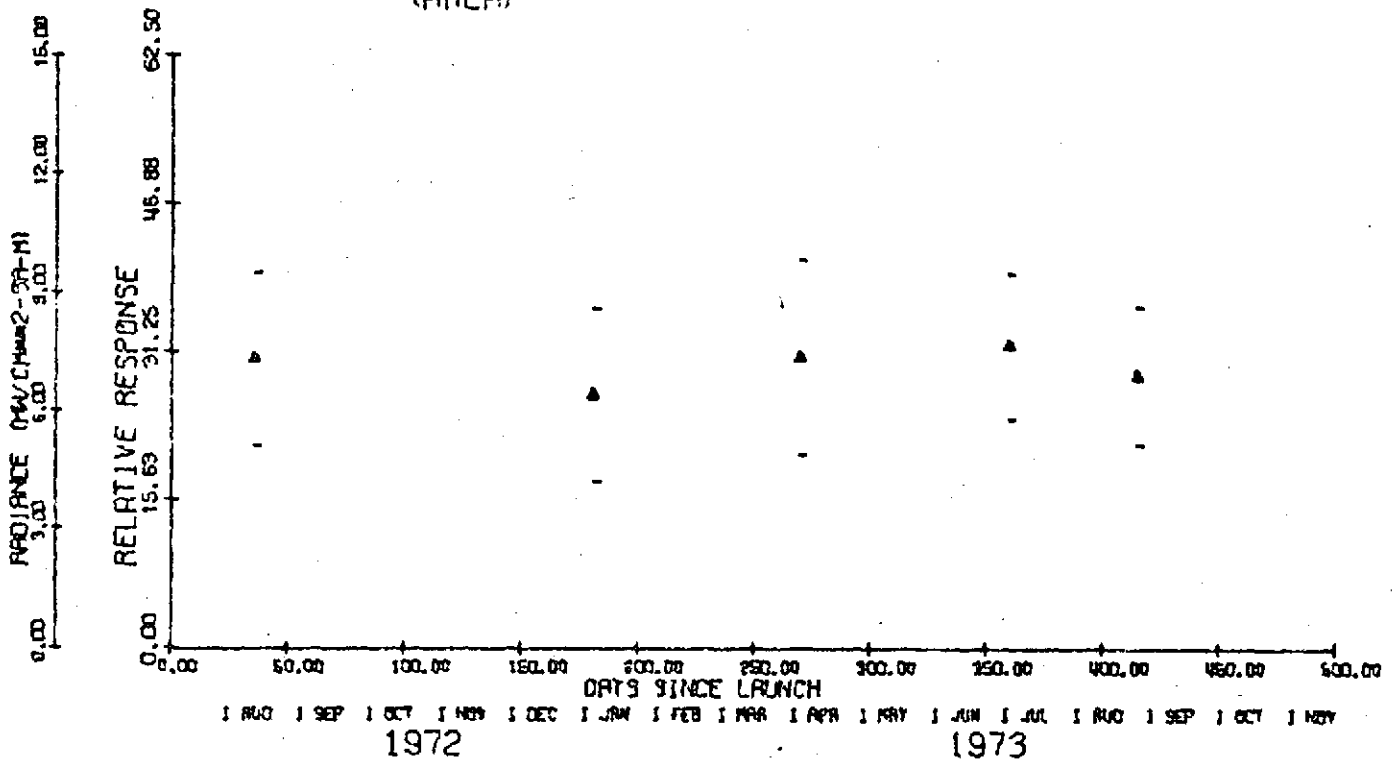
ERTS1 RADIANCE AND
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BAND 5 0.6-0.7 M
CHARLO, MT.
(AREA)



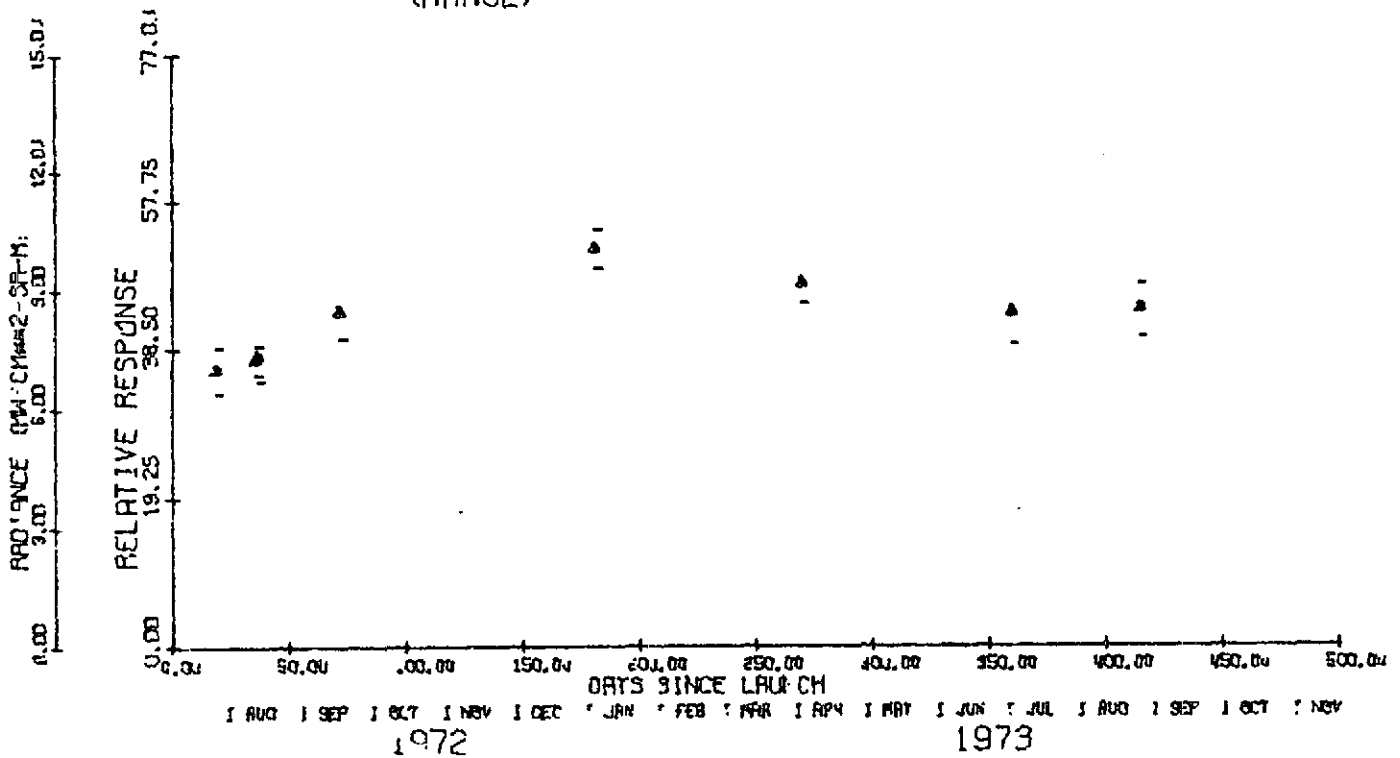
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(AREA)



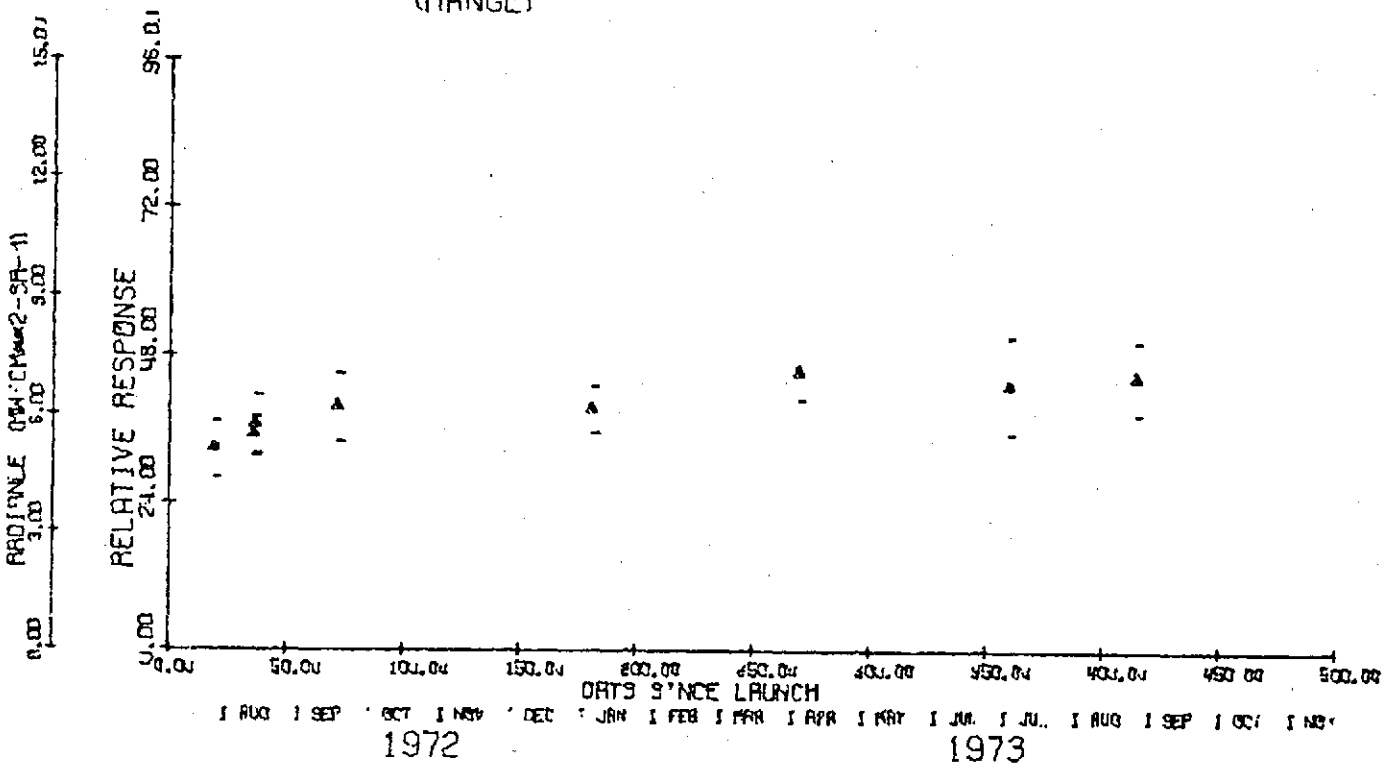
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CHARLO, MT.
(AREA)



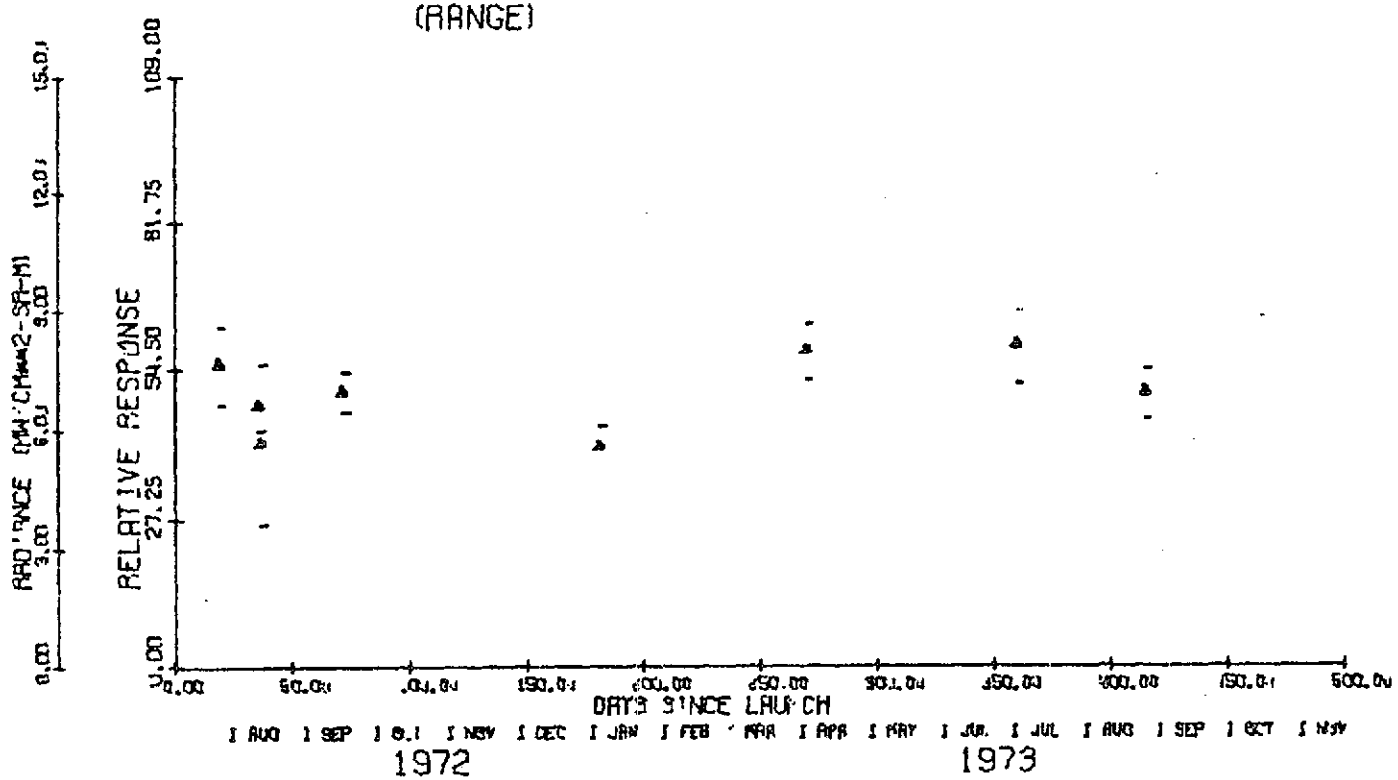
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CHARLO, MT.
(RANGE)



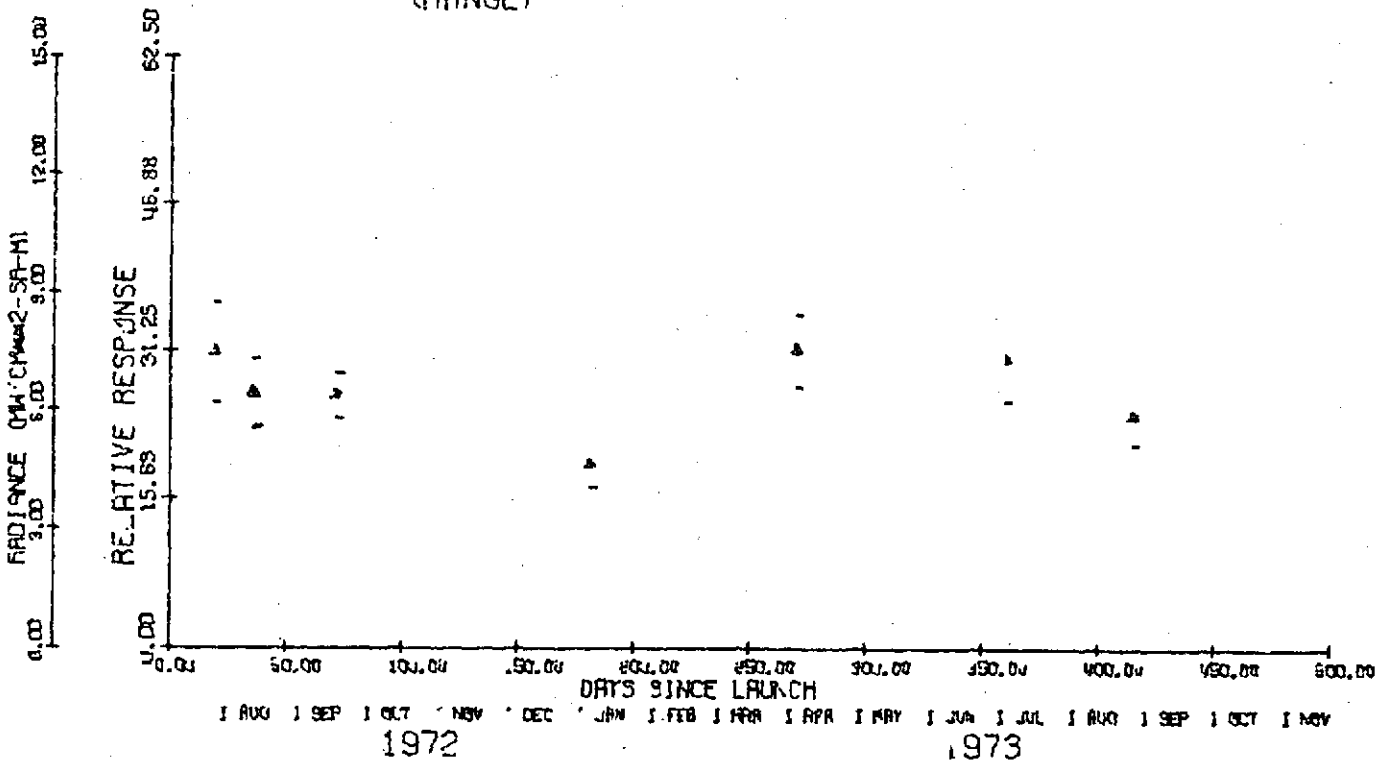
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(RANGE)

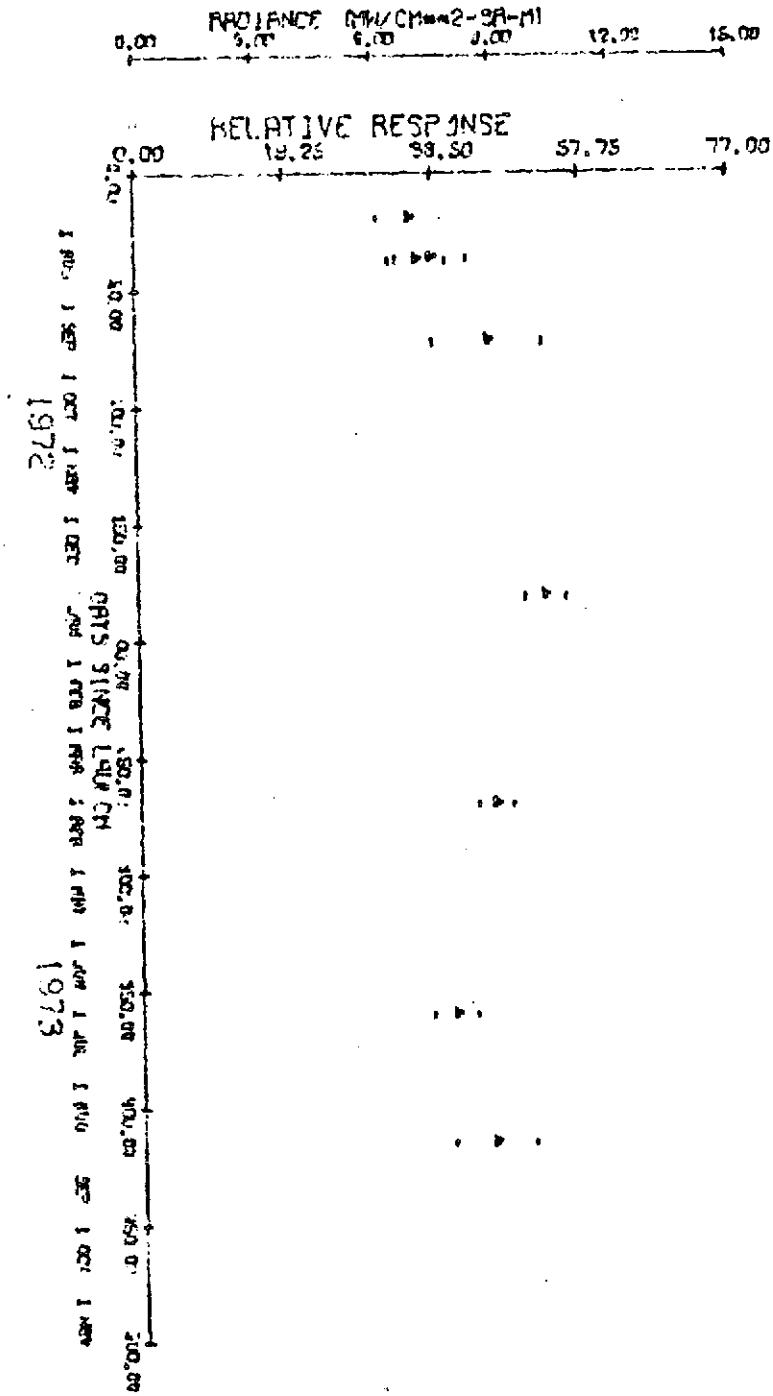


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(RANGE)

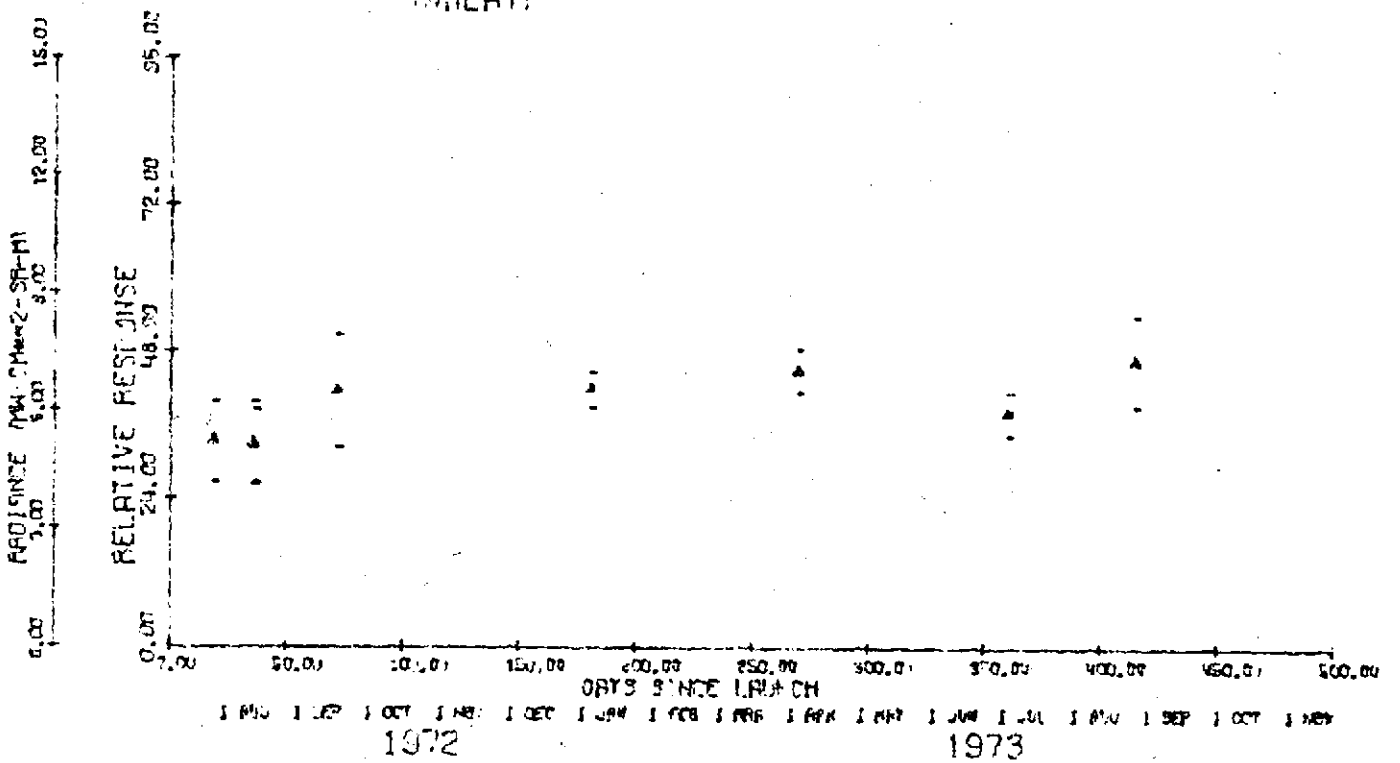


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
CHARLO, MT.
(RANGE)




RADIANCE MW/CM**2-SR-MI
0.00
3.00
6.00
9.00
12.00
15.00
RELATIVE RESPONSE
0.00
19.25
38.50
57.75
77.00
1972
1973
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
CHARLO, MT.
(WHEAT)

ERTS1 RADIANCE AND
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(WHEAT)

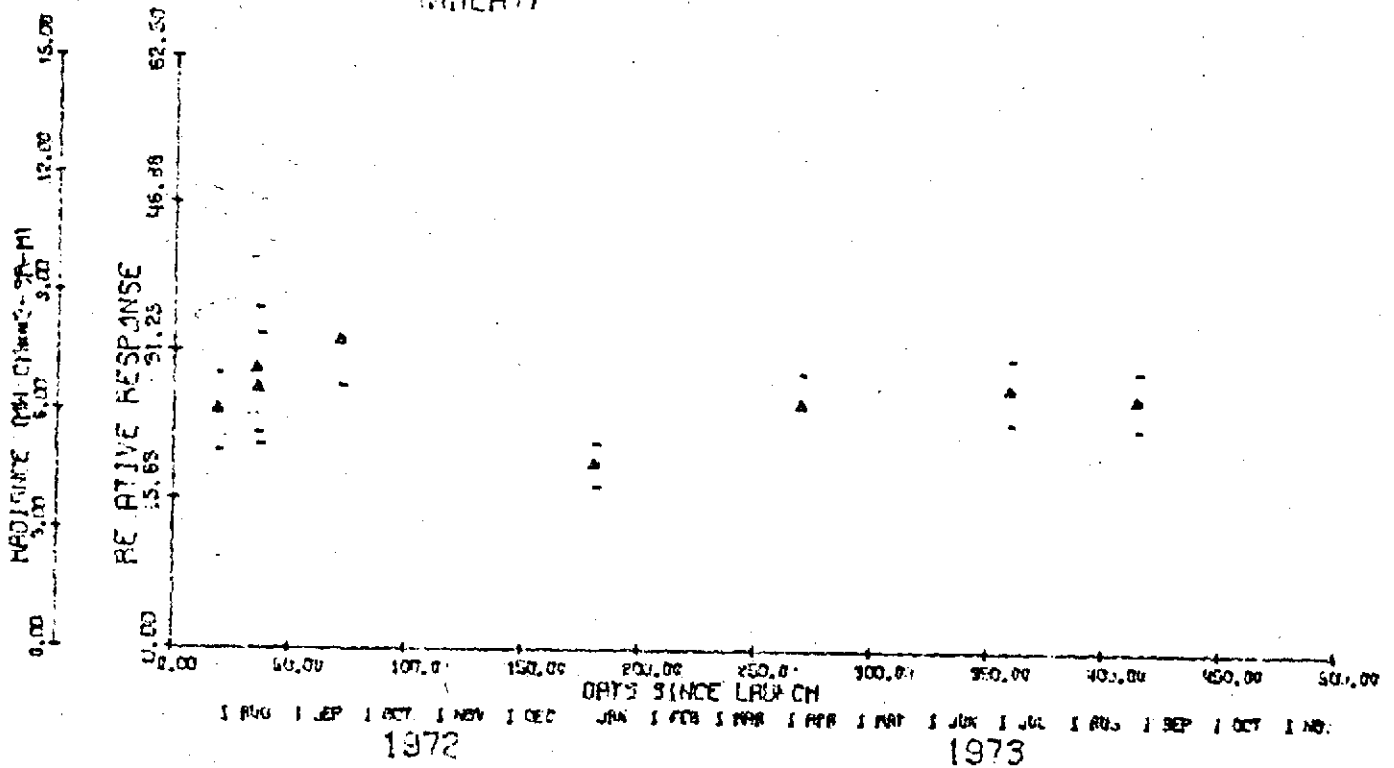


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ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
CHARLO,MT.
(WHEAT)

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
CHARLO, MT.
(WHEAT)



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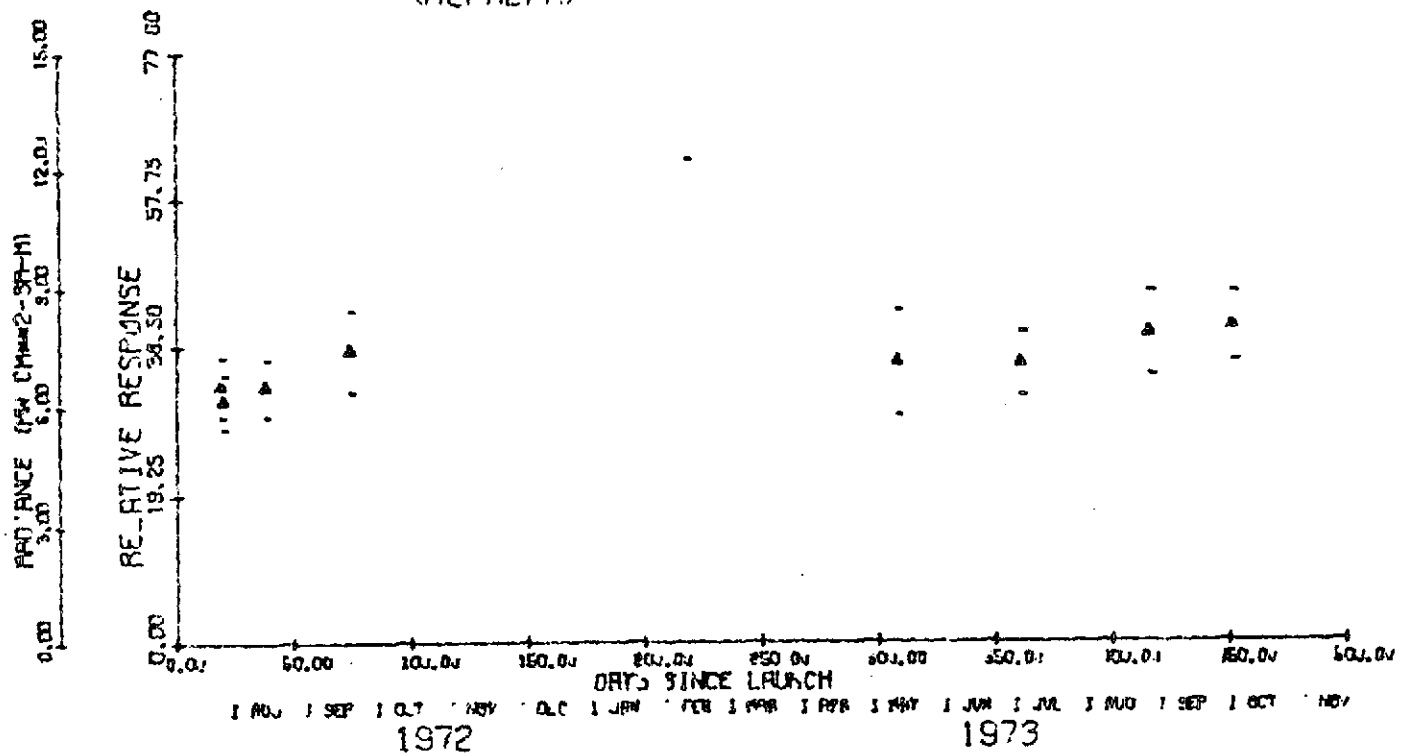
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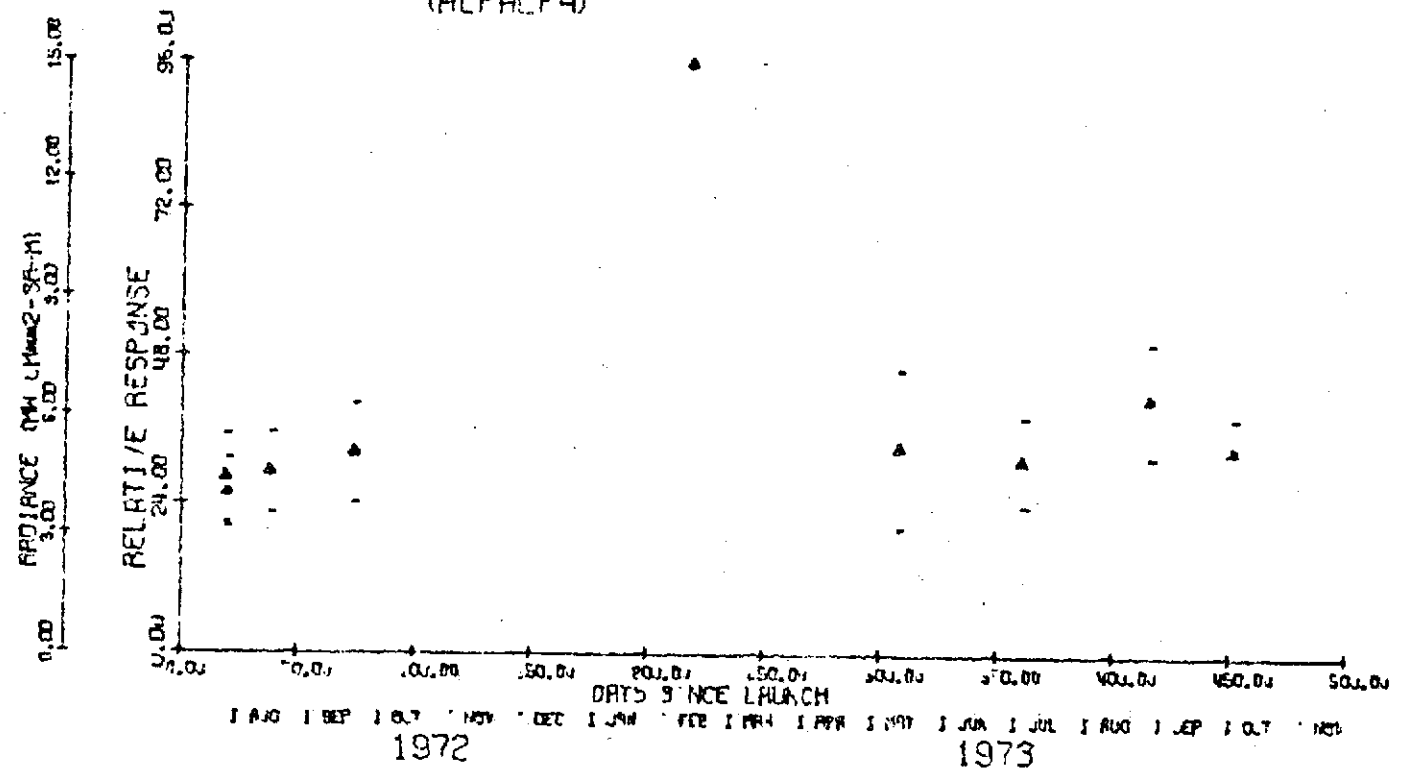


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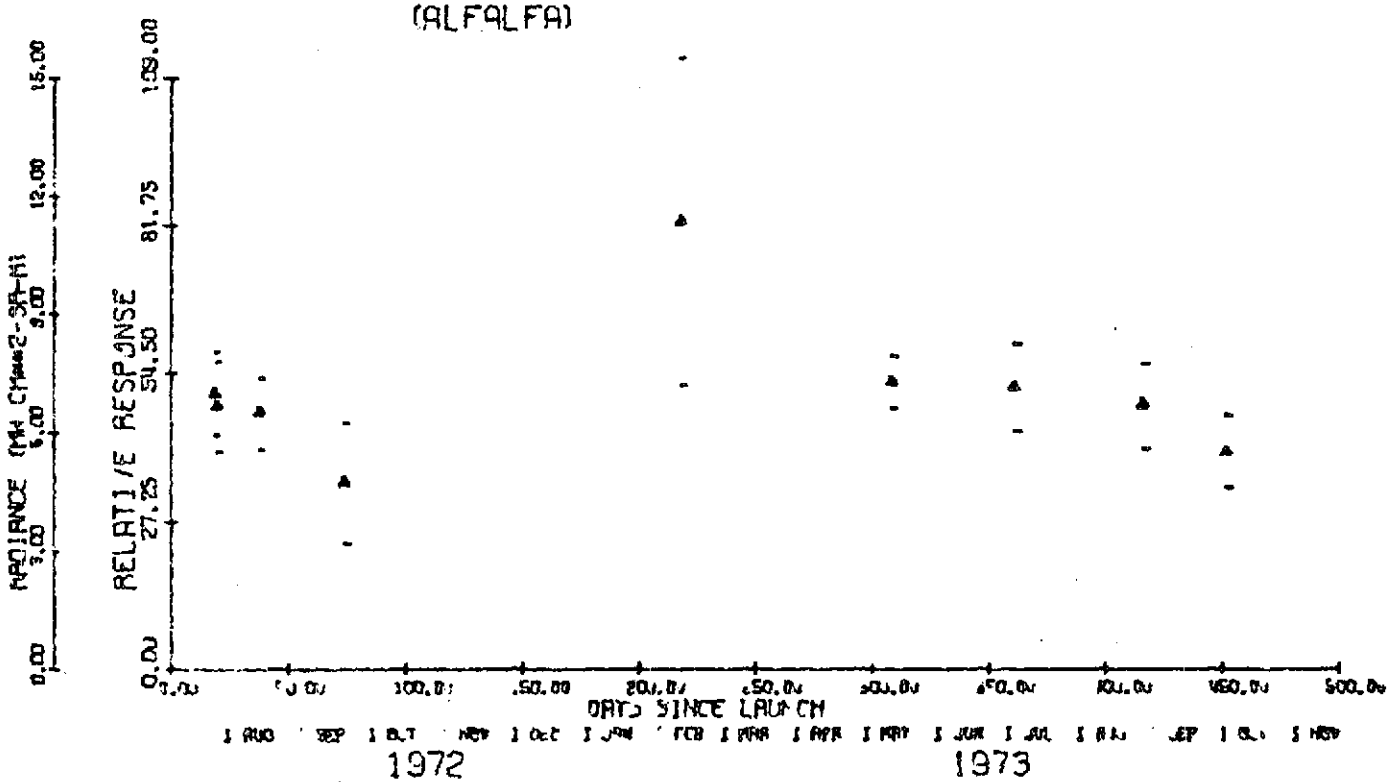
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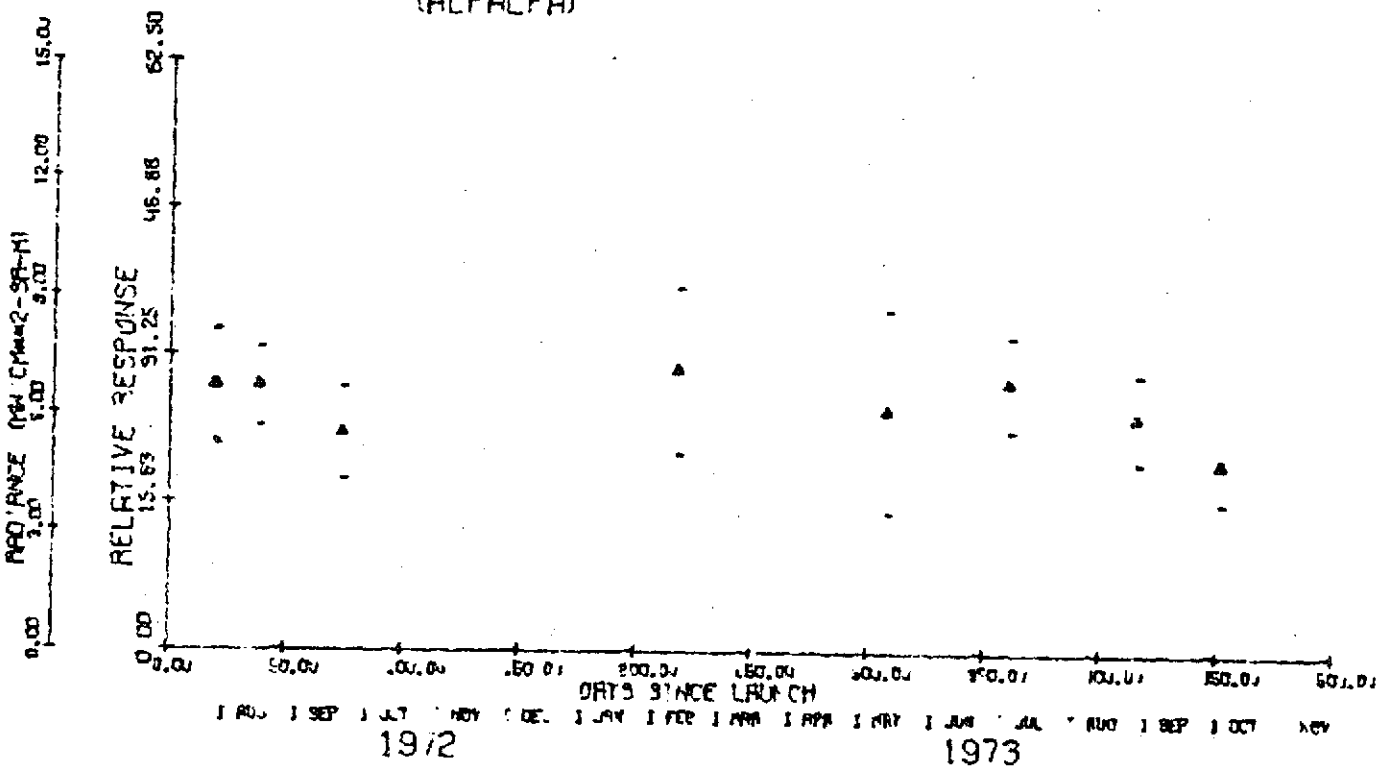
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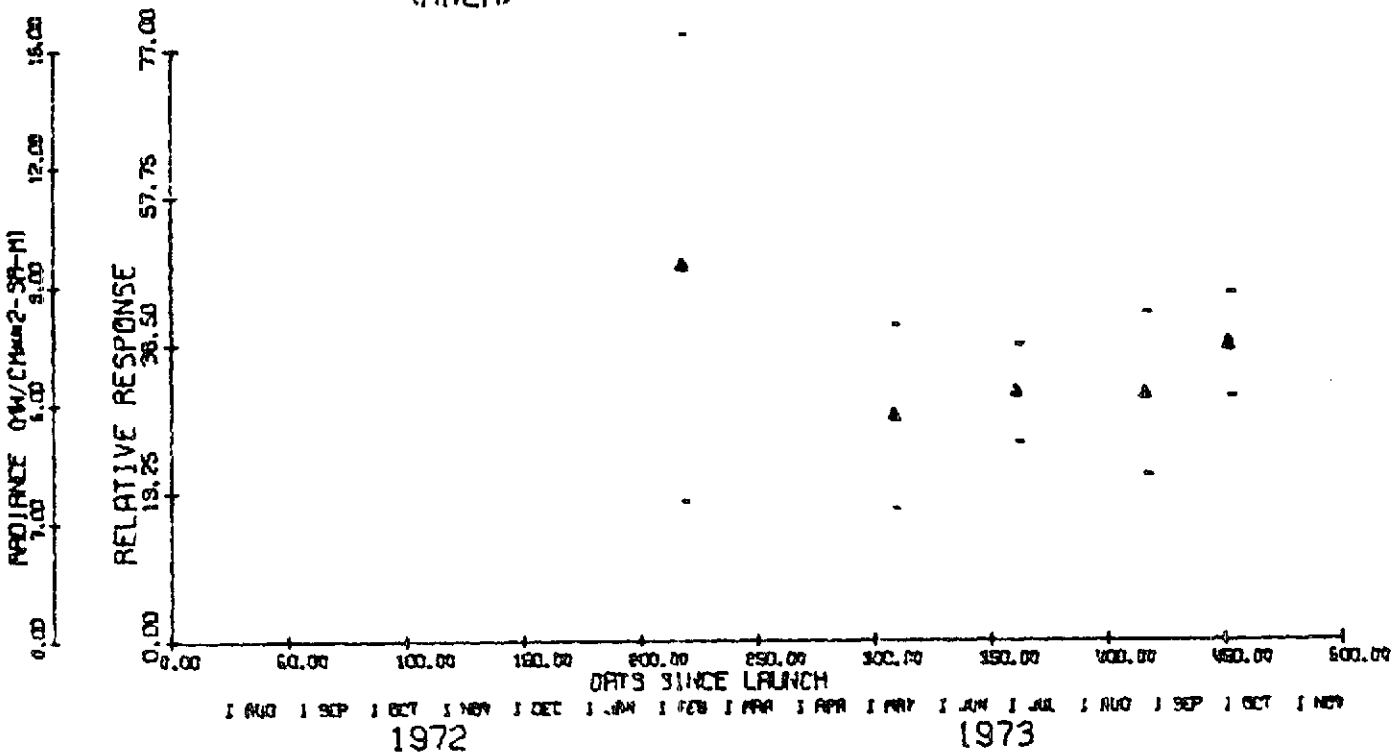
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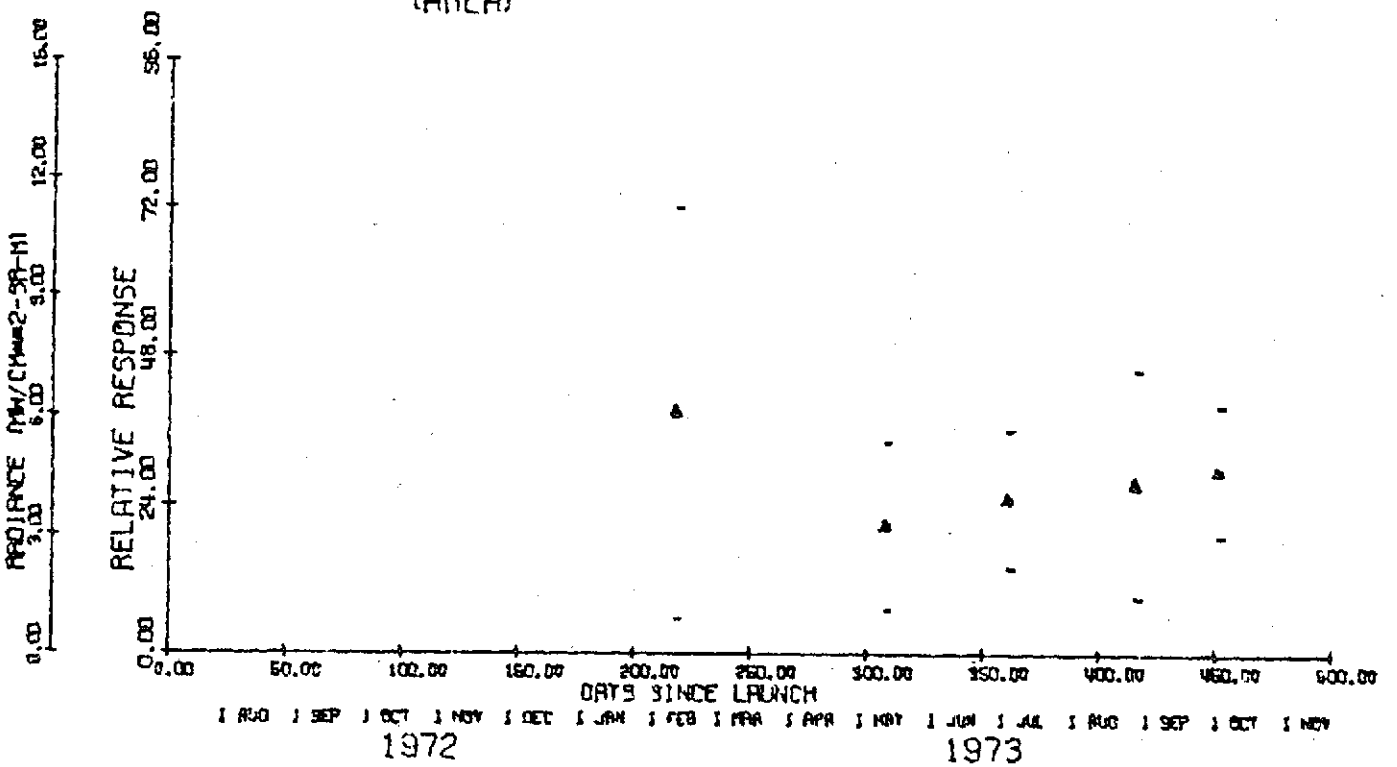
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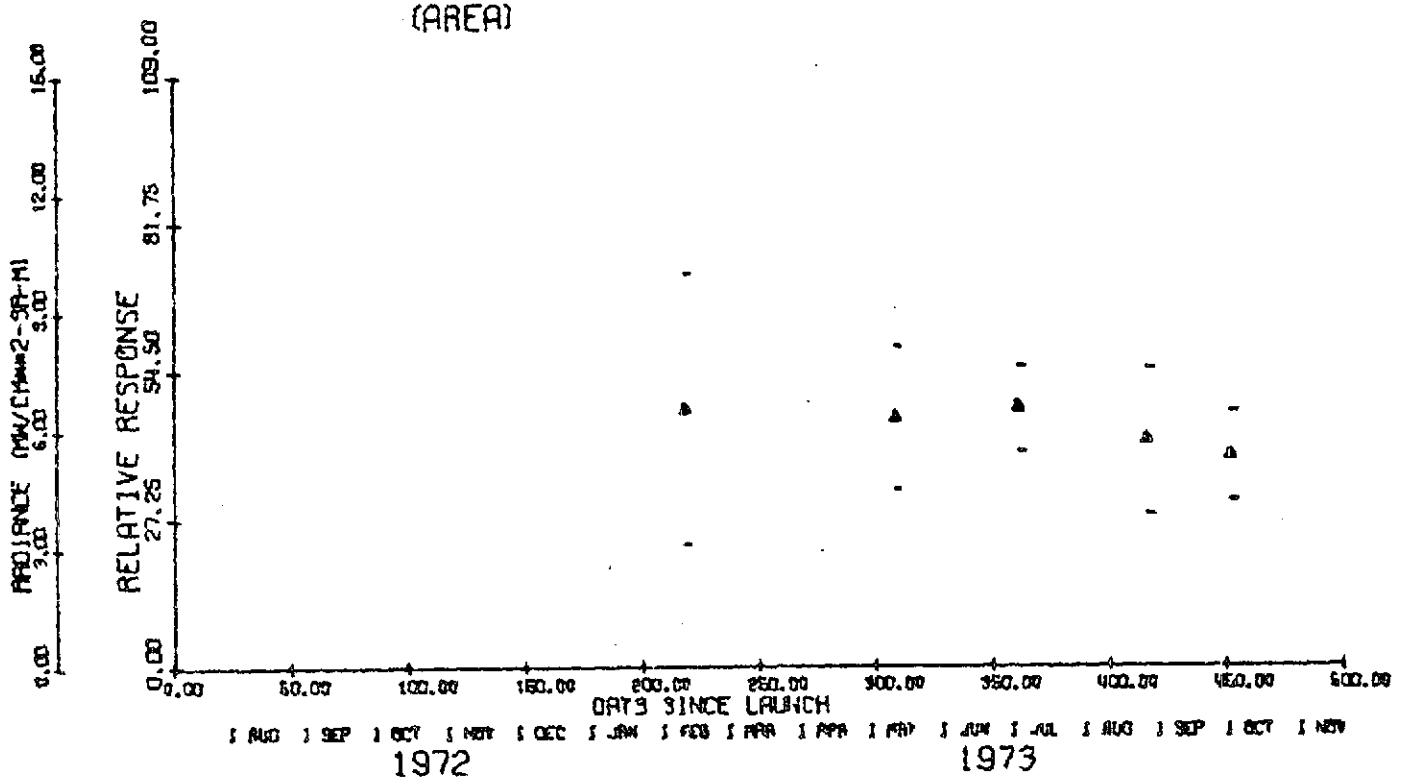
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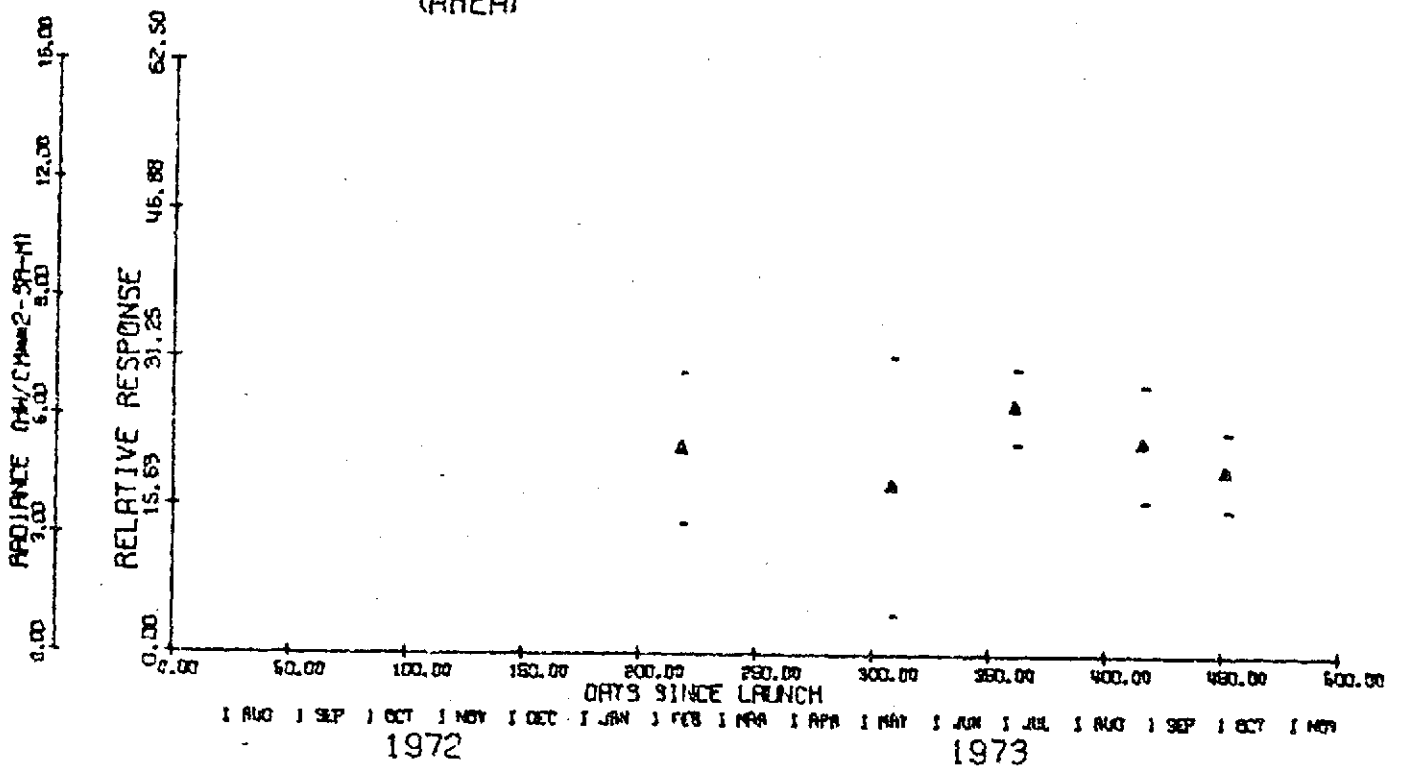
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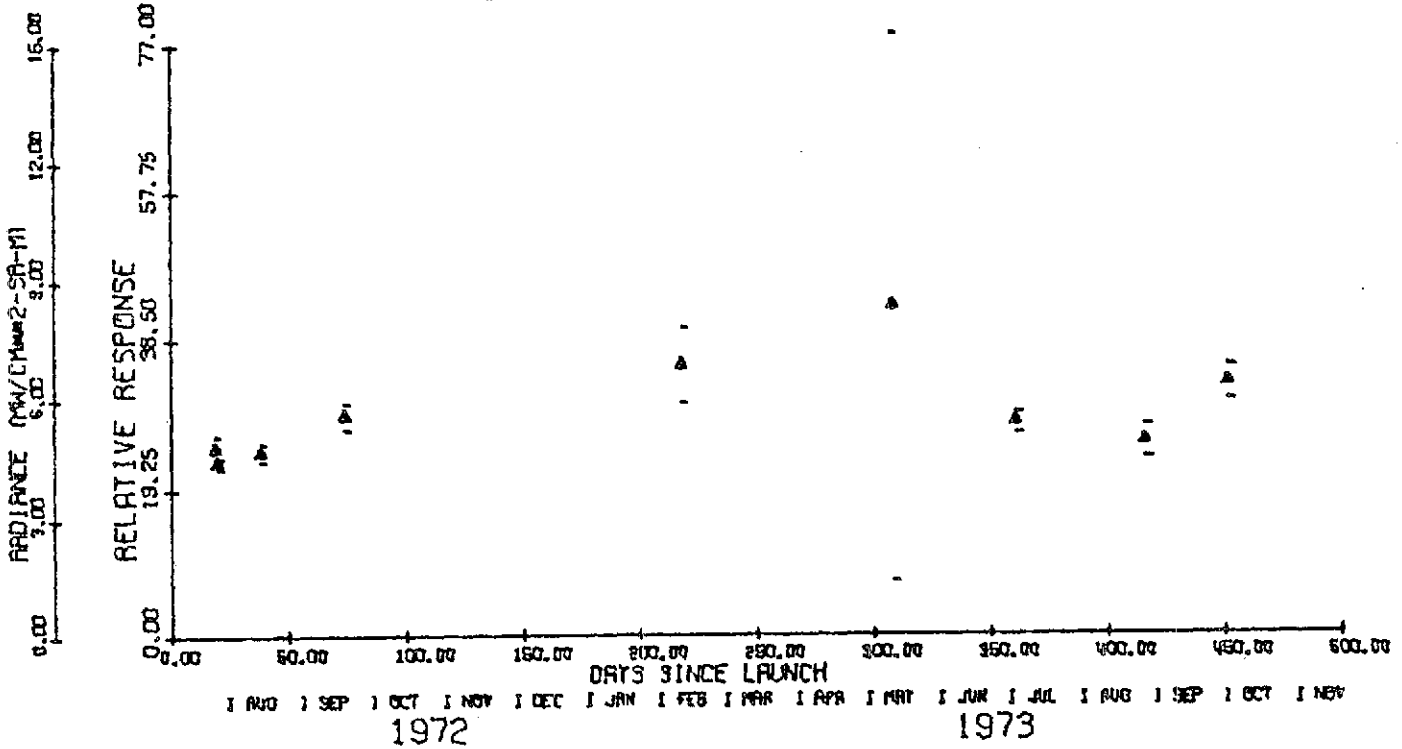
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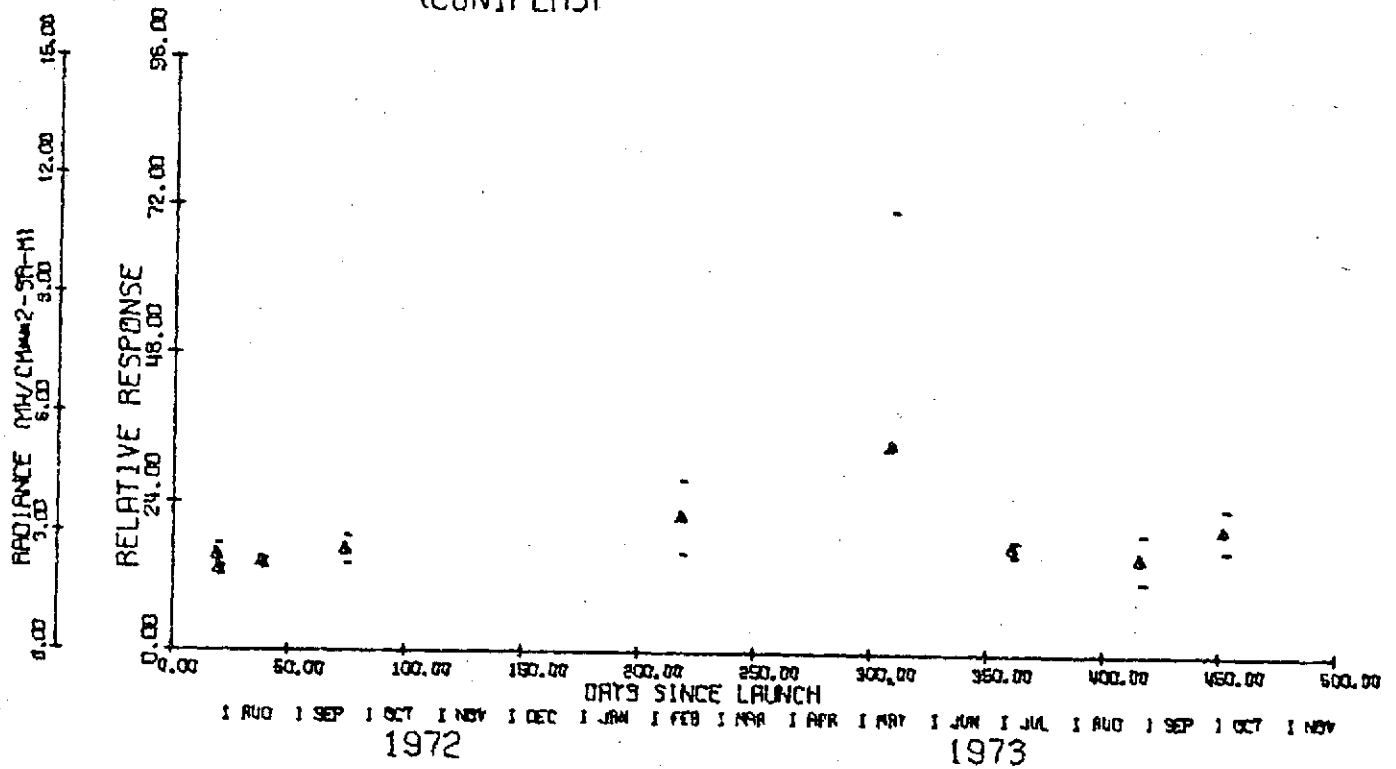
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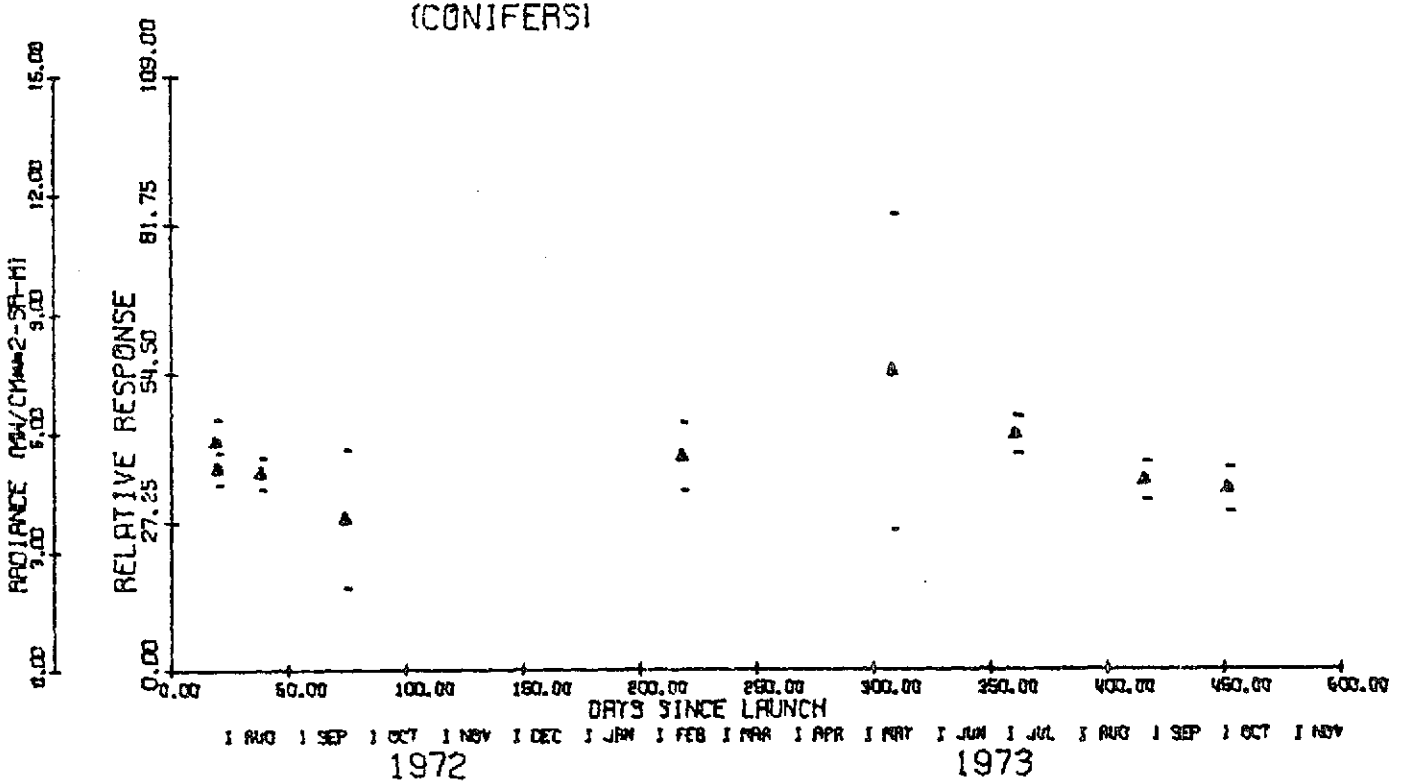
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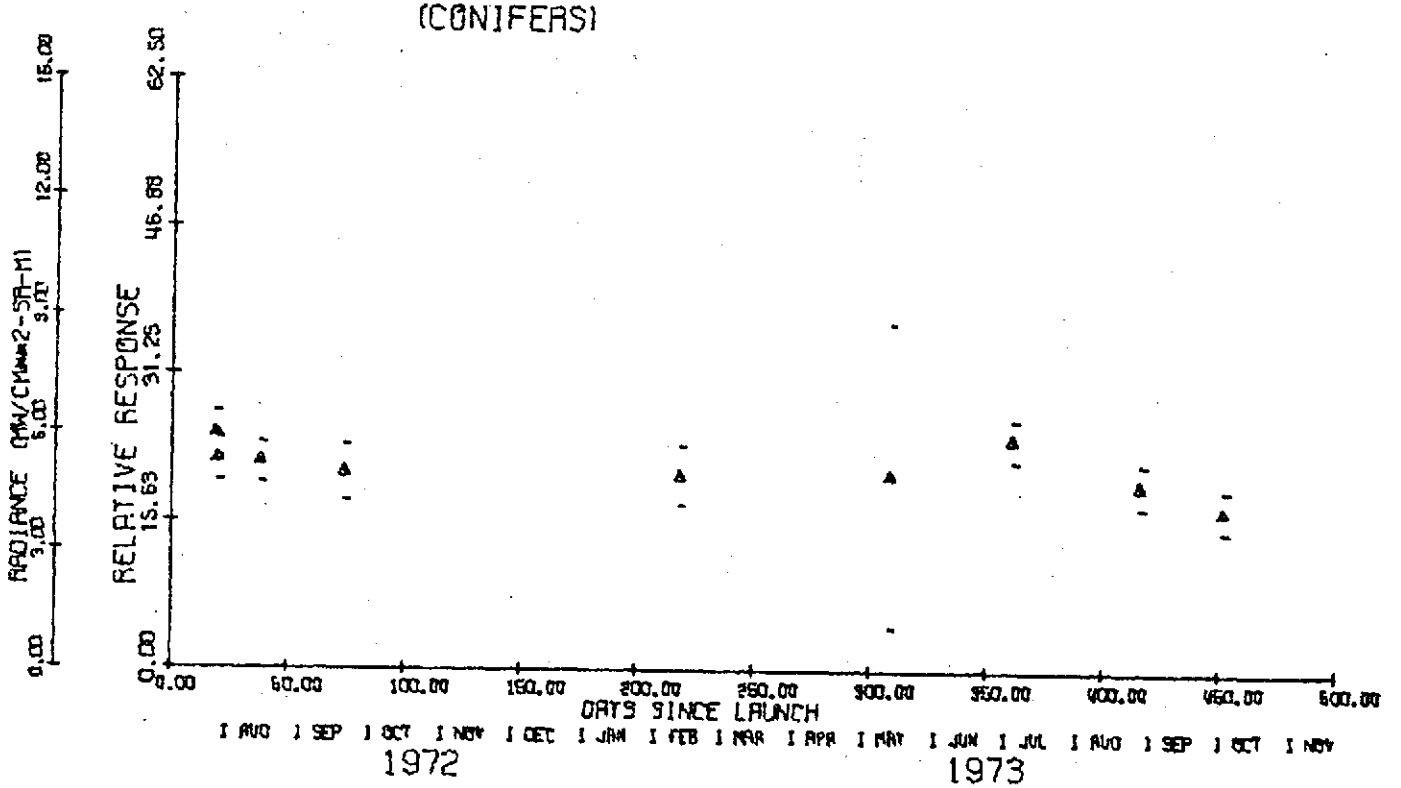
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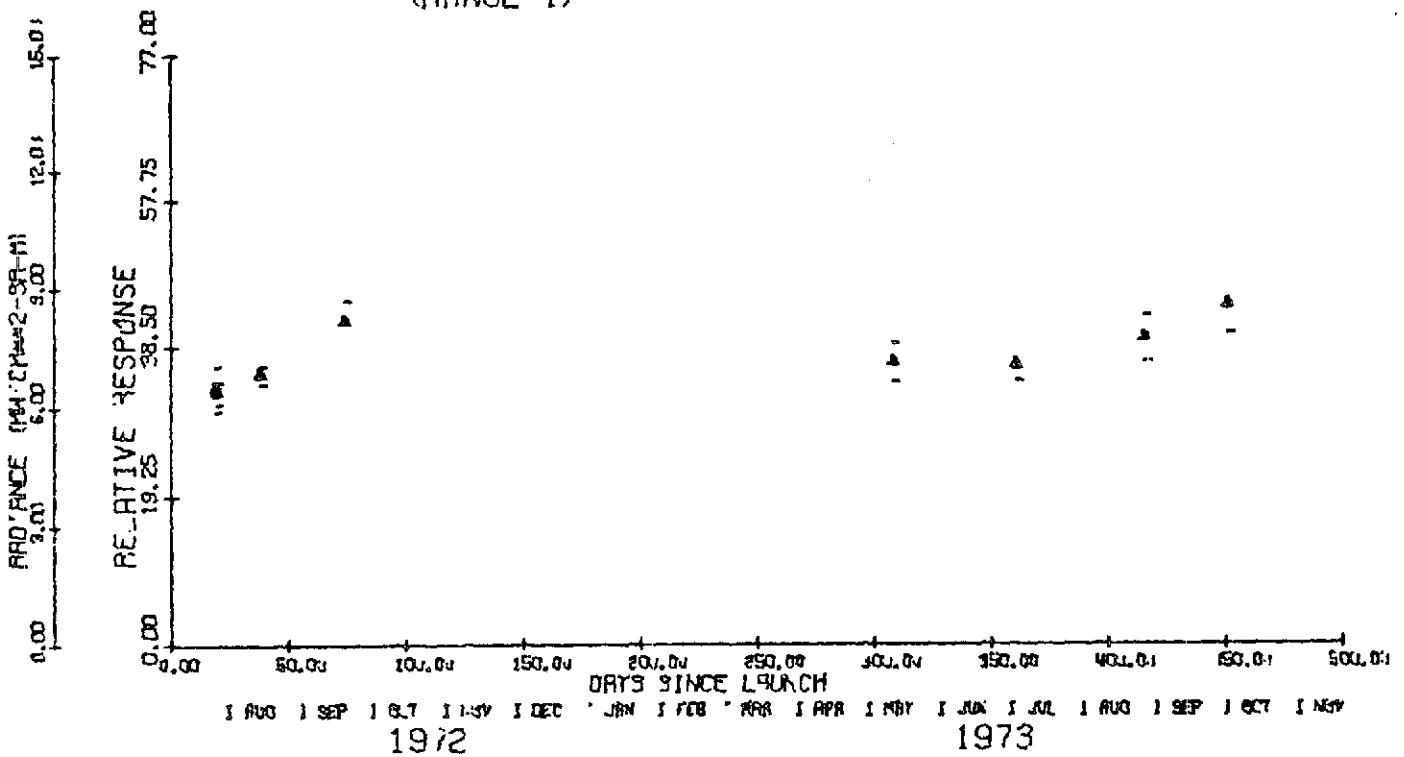
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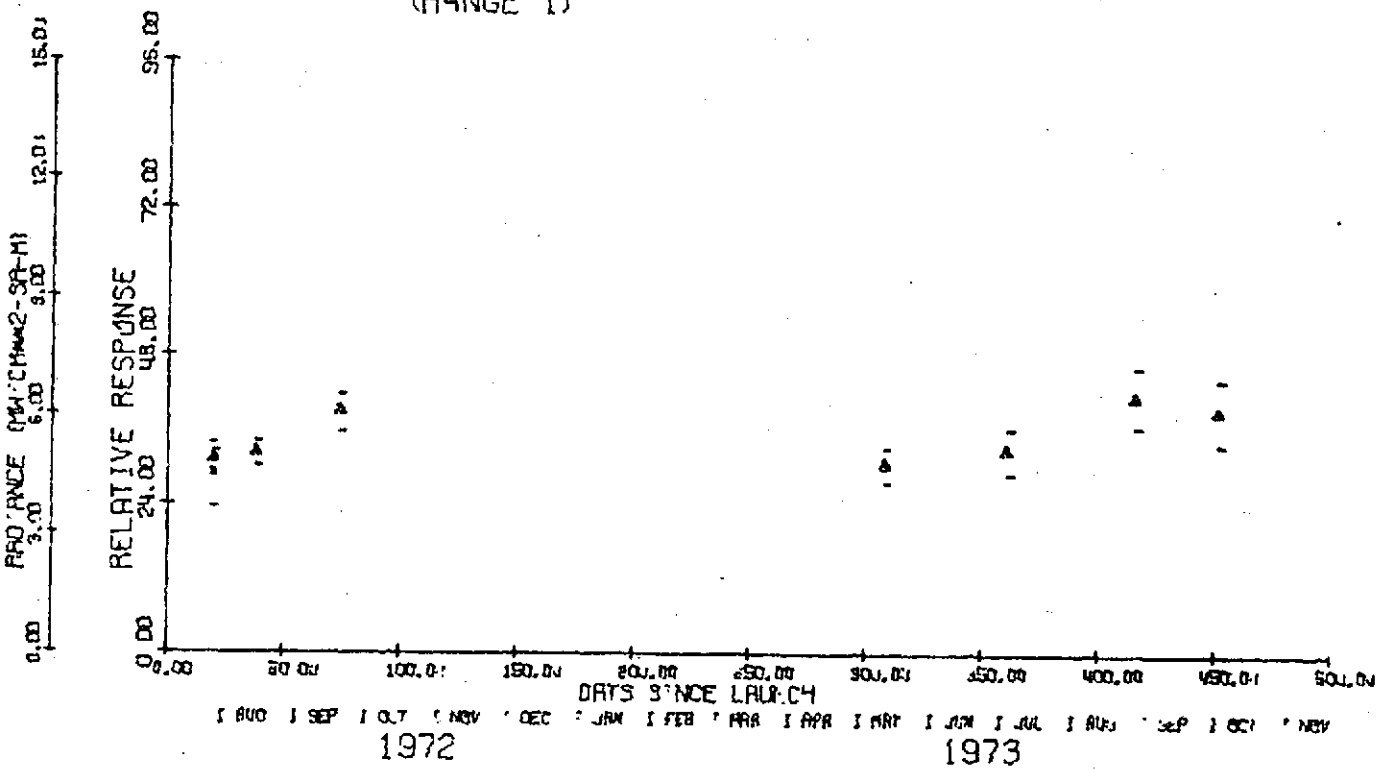
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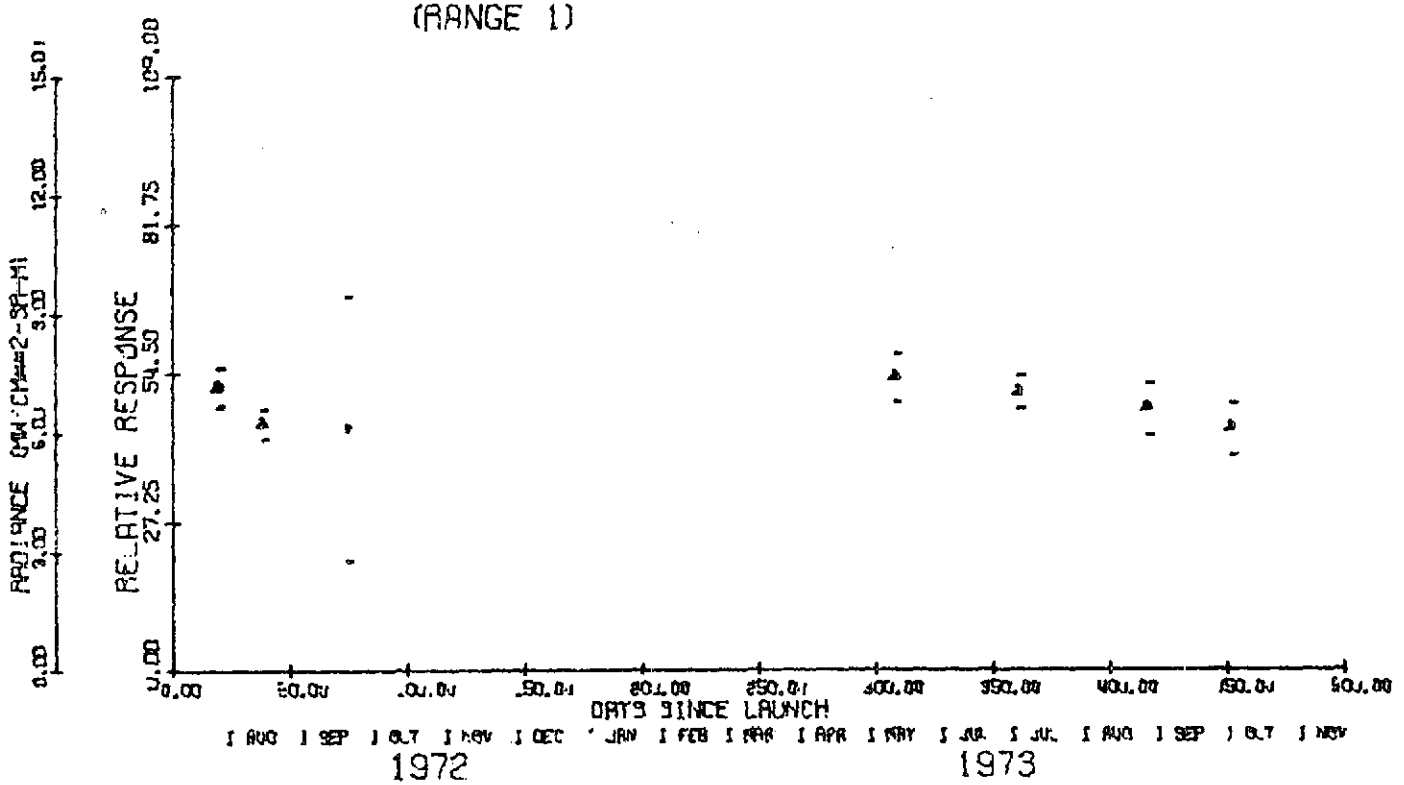
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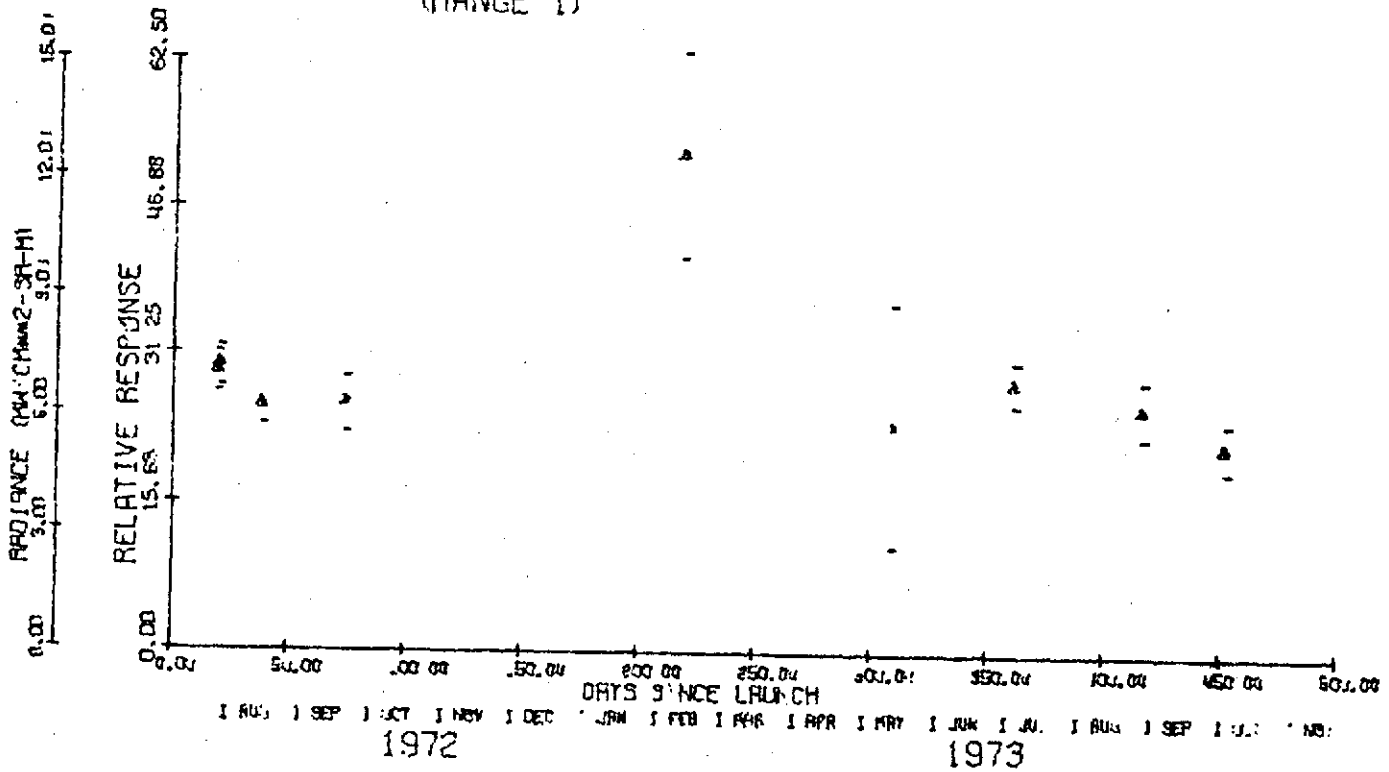
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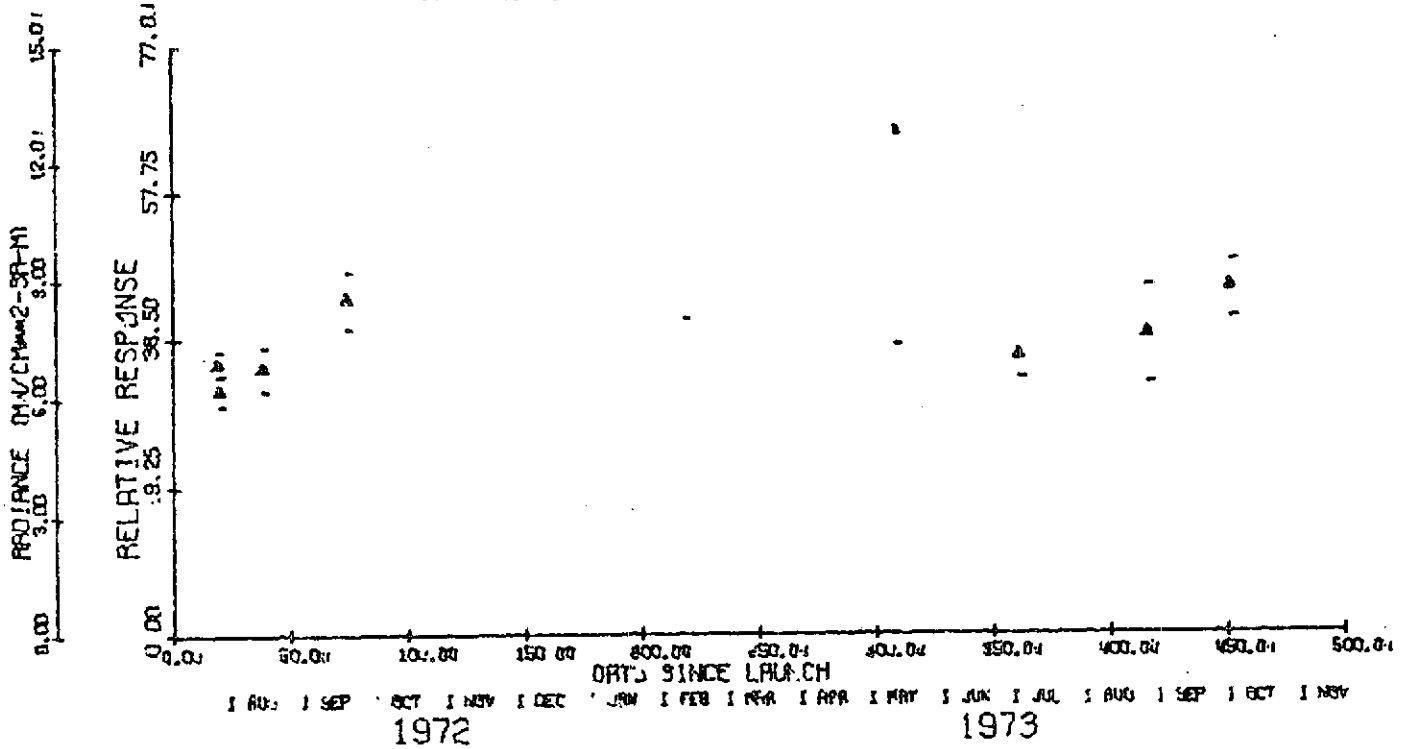
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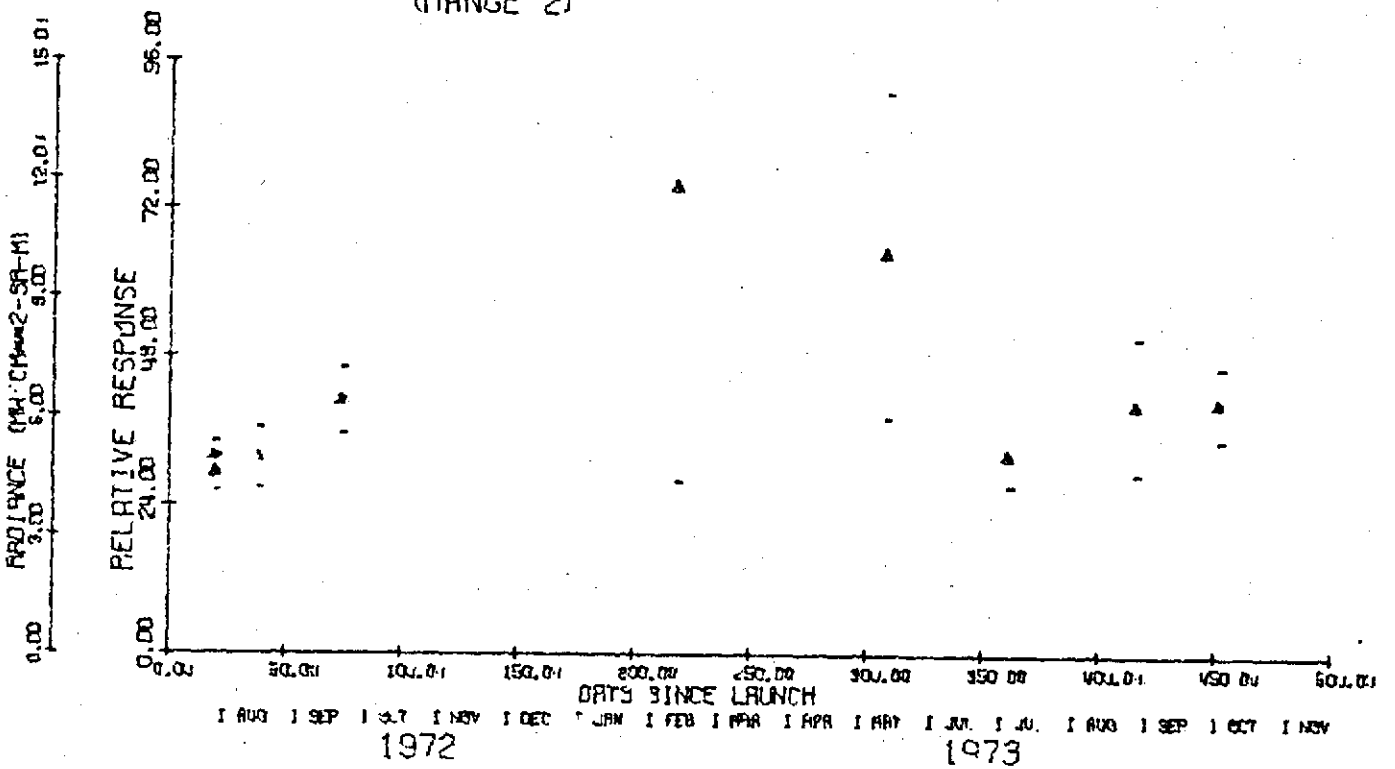
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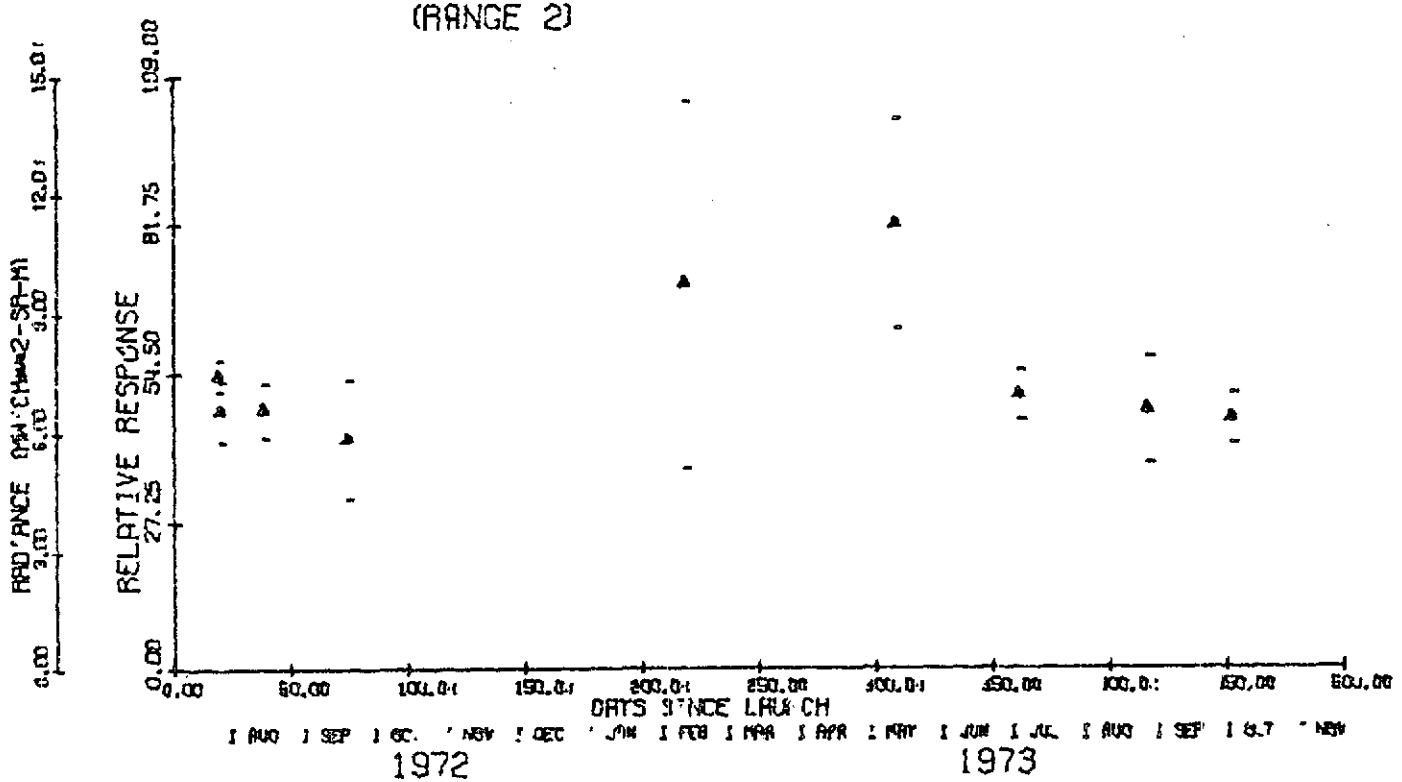
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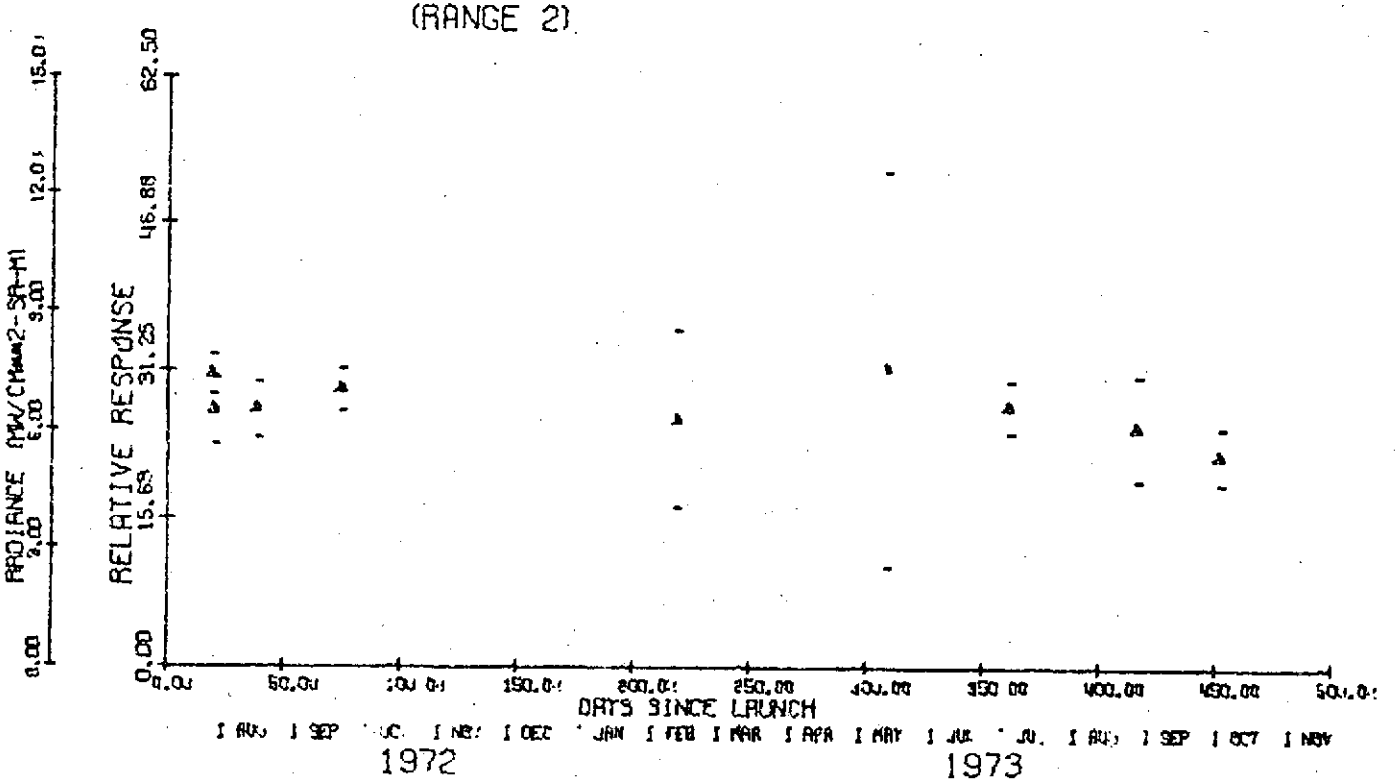
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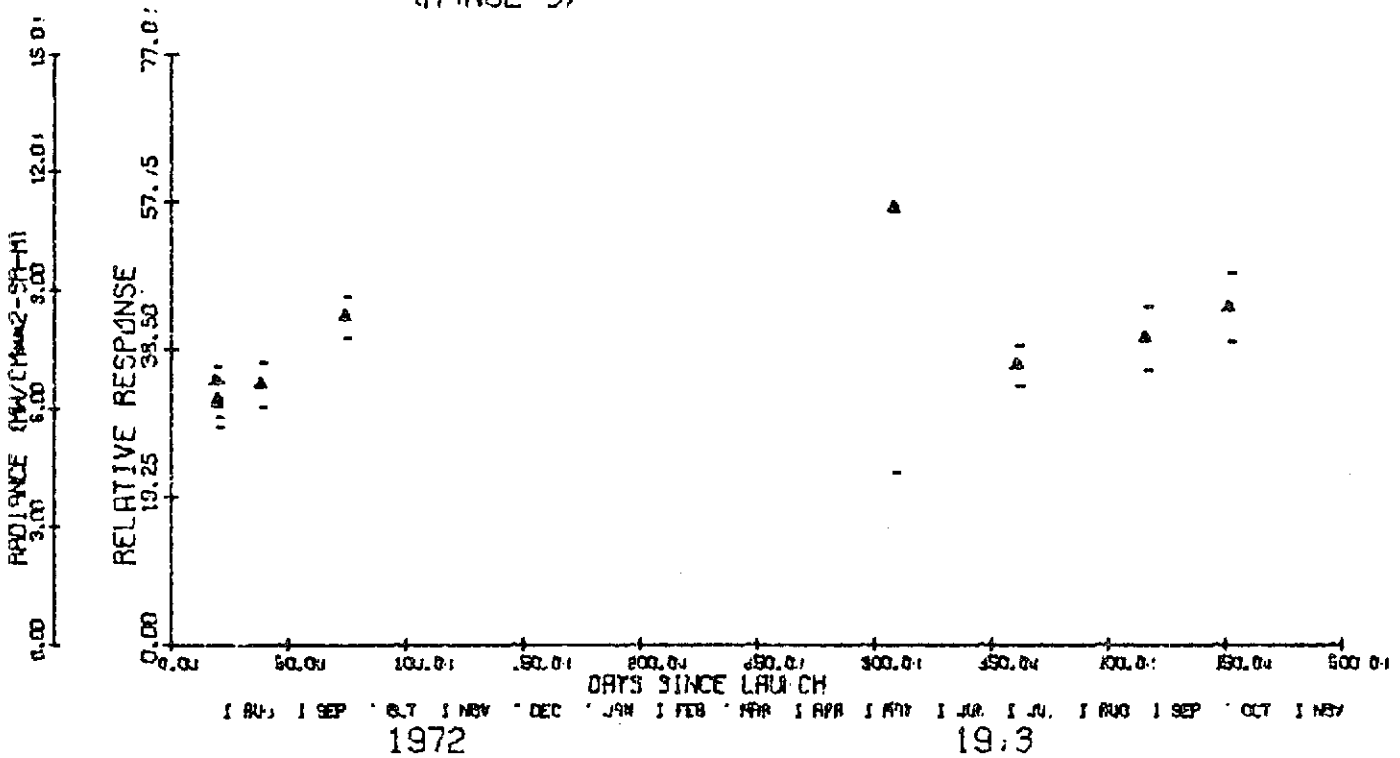
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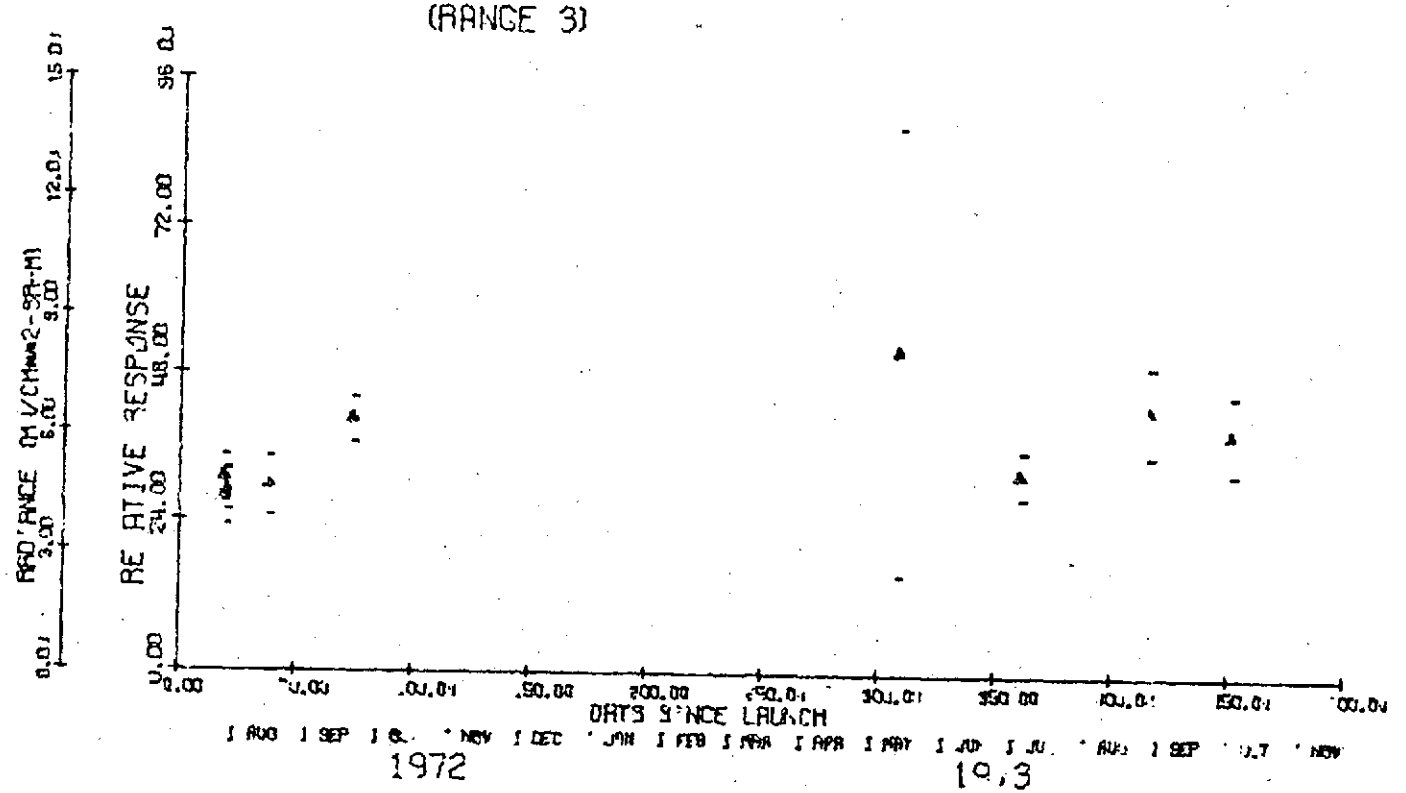
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(RANGE 2)



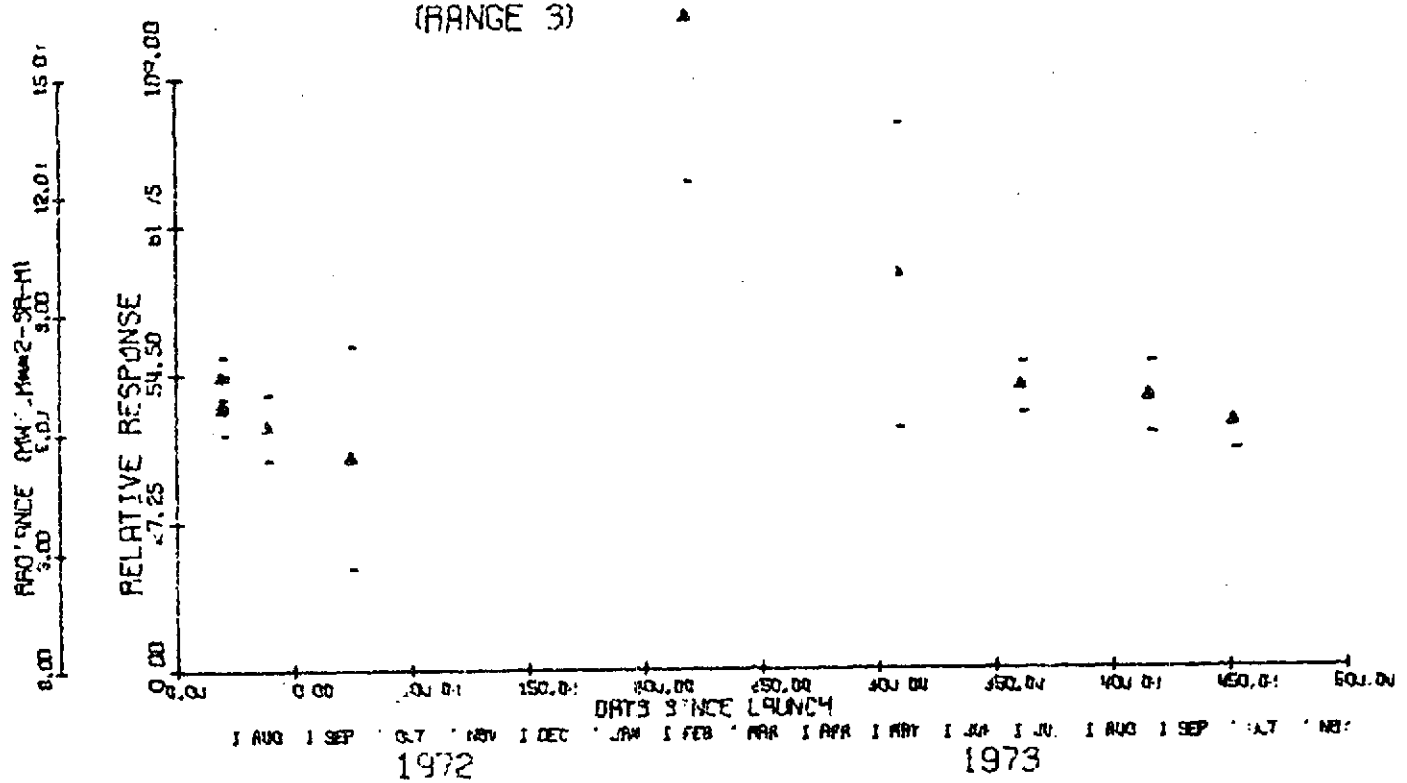
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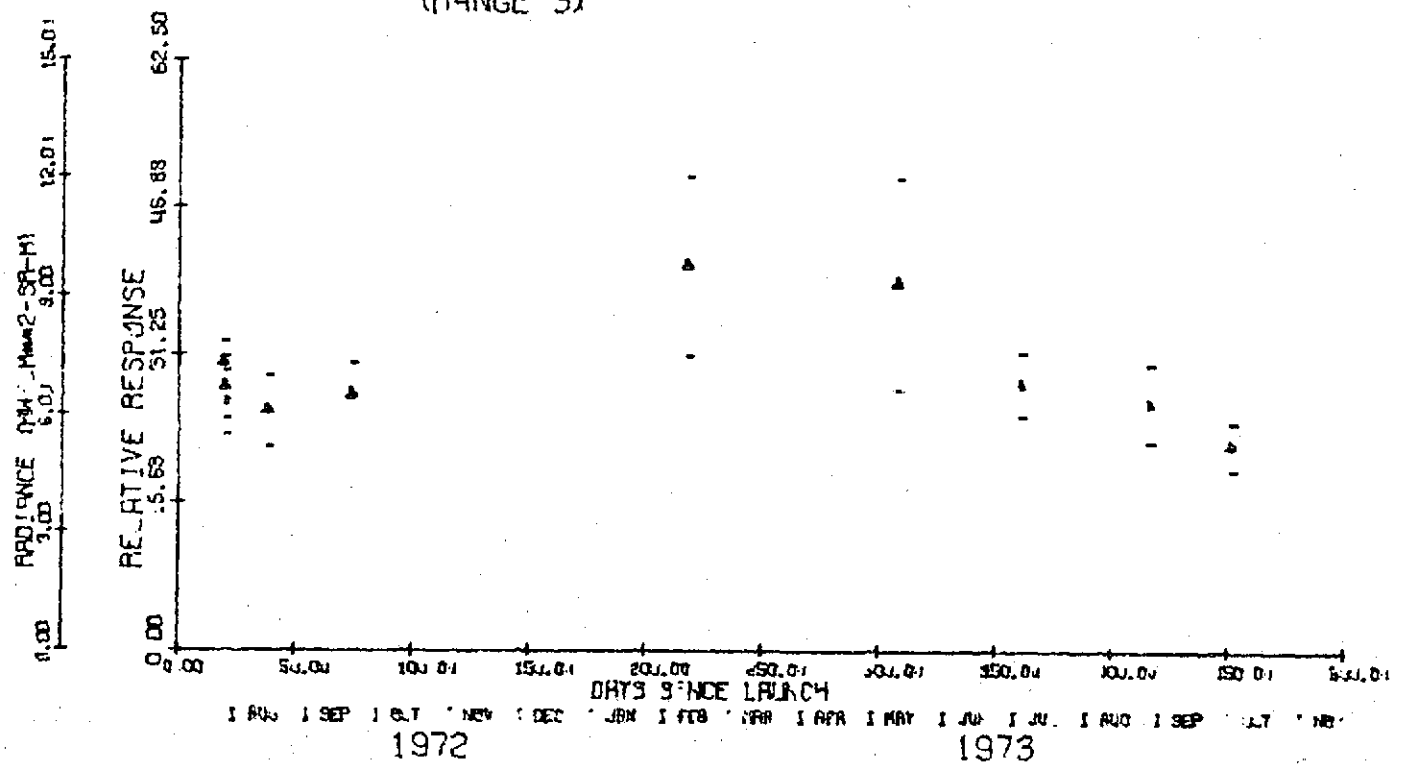
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RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
HELMER ID.
(RANGE 3)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
HELMER, ID.
(RANGE 3)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
HELMER ID.
(RANGE 3)



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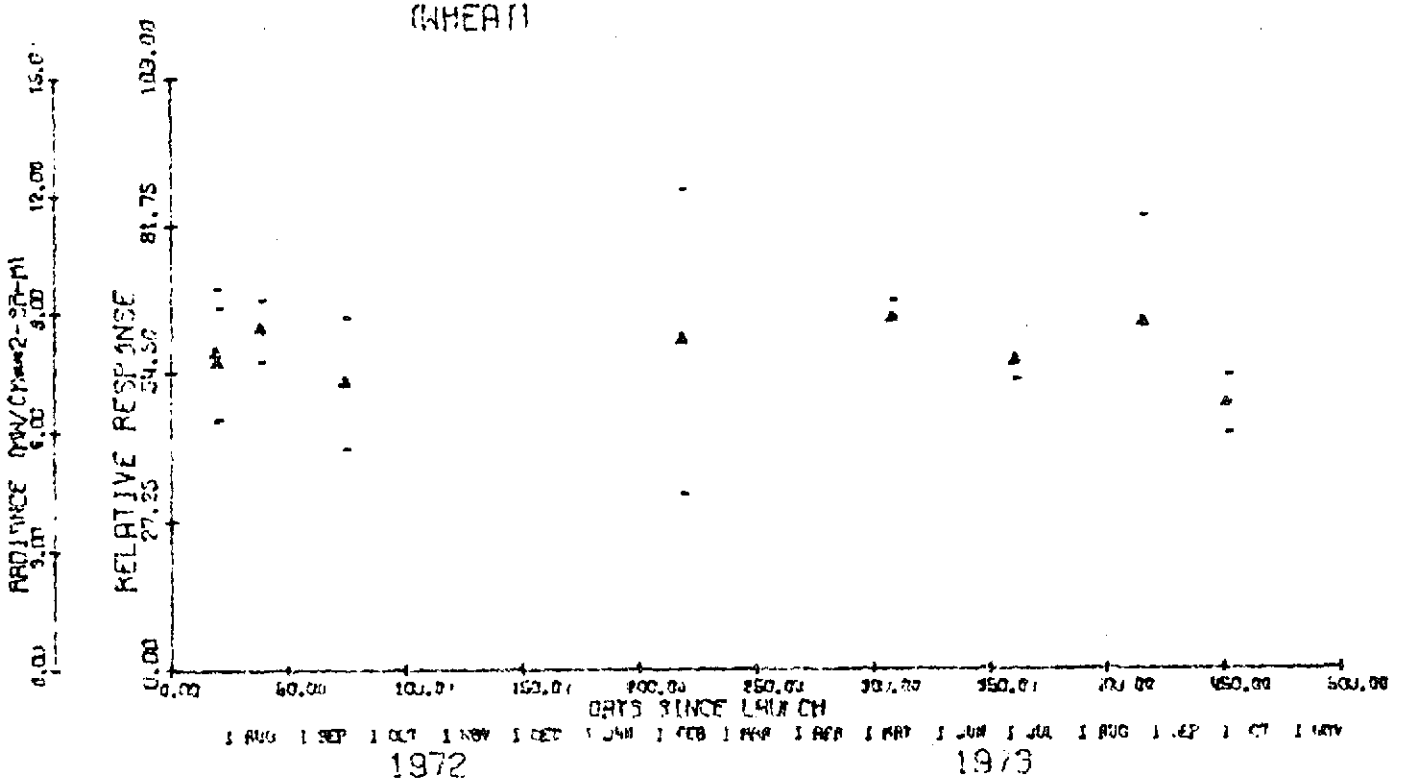
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(WHEAT)

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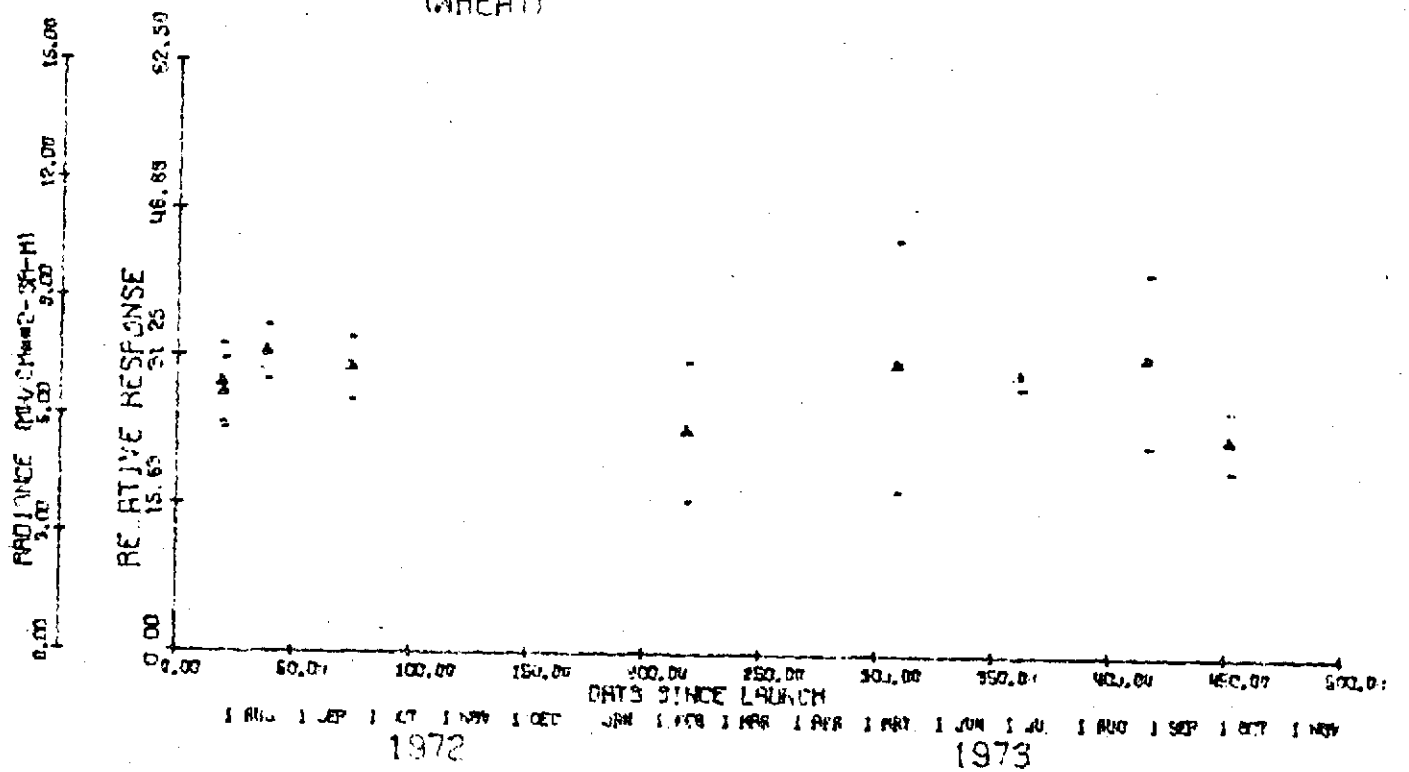


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RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
HELMER, ID.
(WHEAT)

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RELATIVE SPECTRAL RESPONSE
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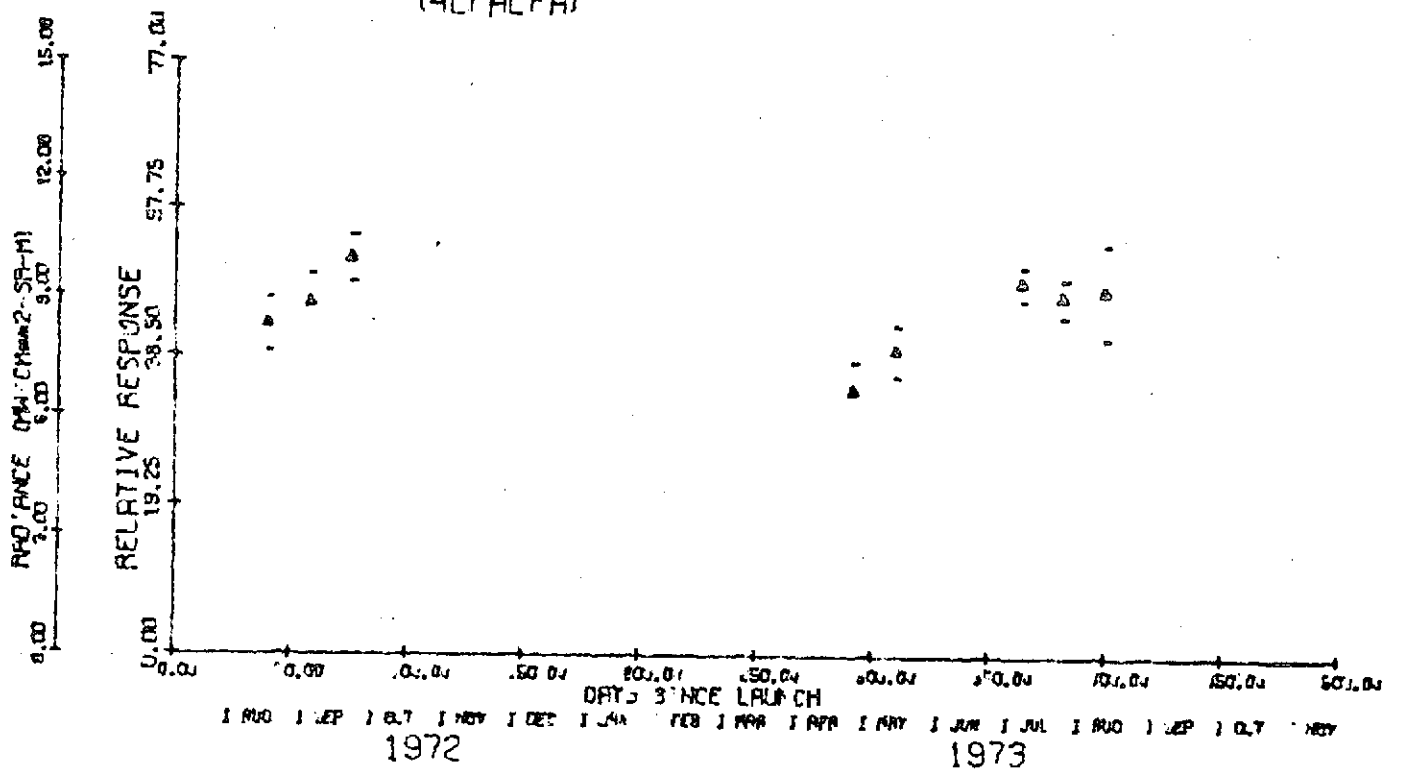
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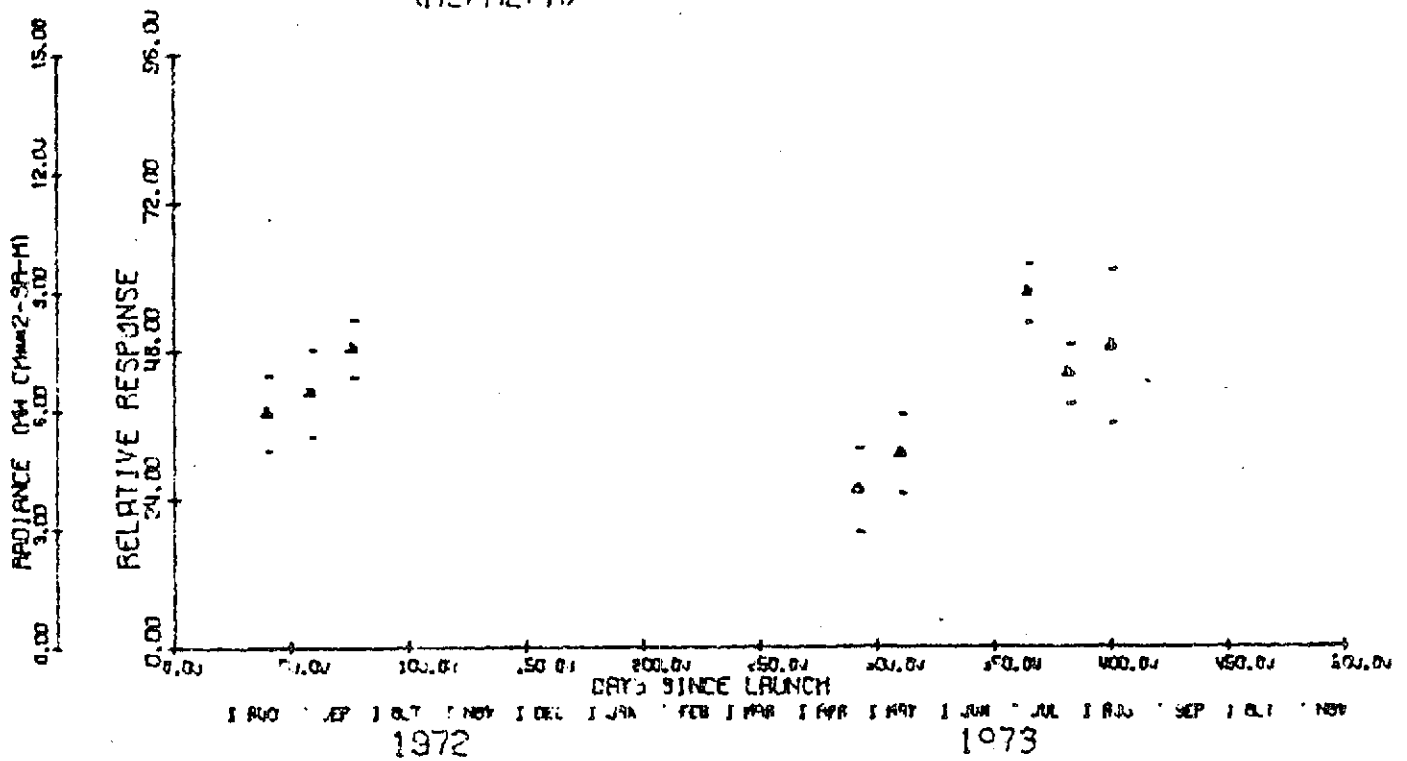
COLUMBIA VALLEY CORRIDOR

Bickleton, WA
46°03'N, 120°13'W

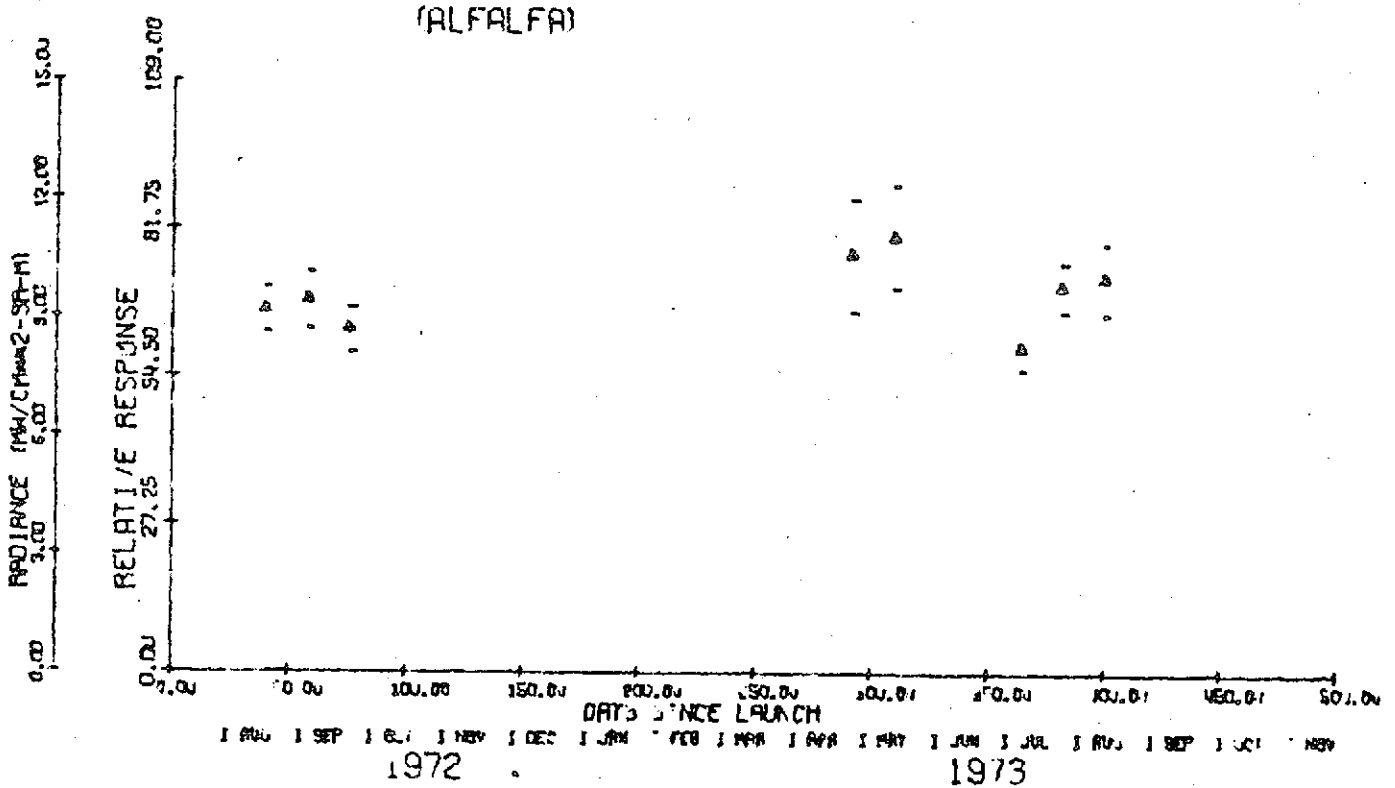
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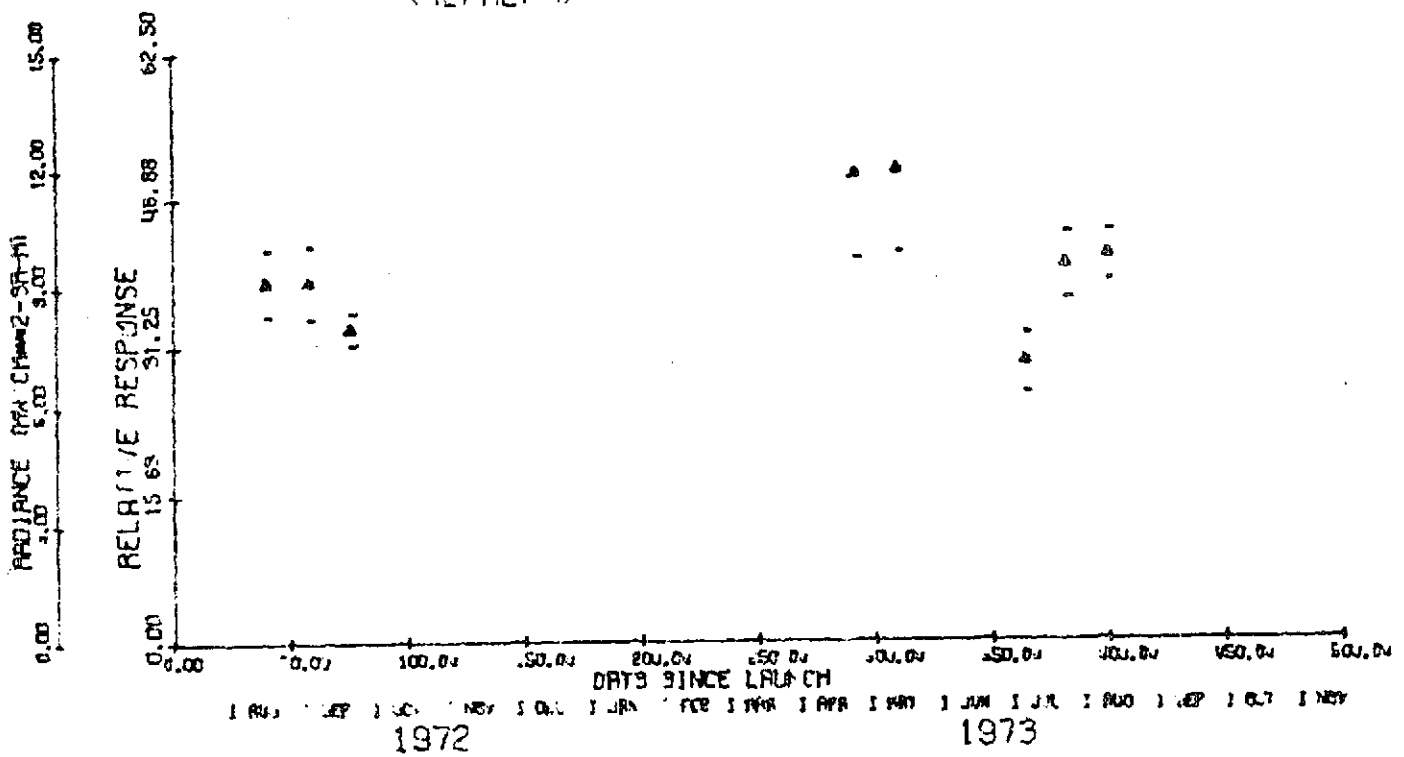
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(ALFALFA)



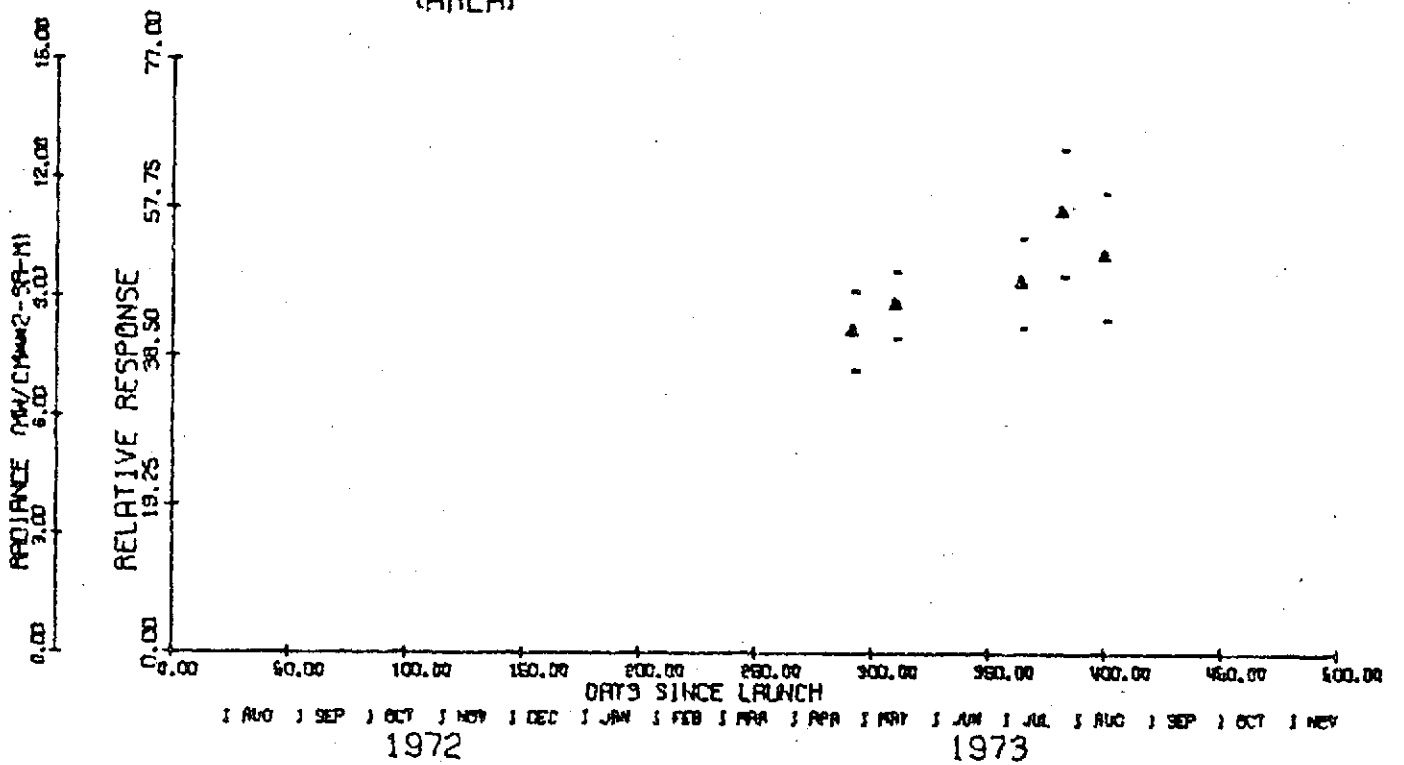
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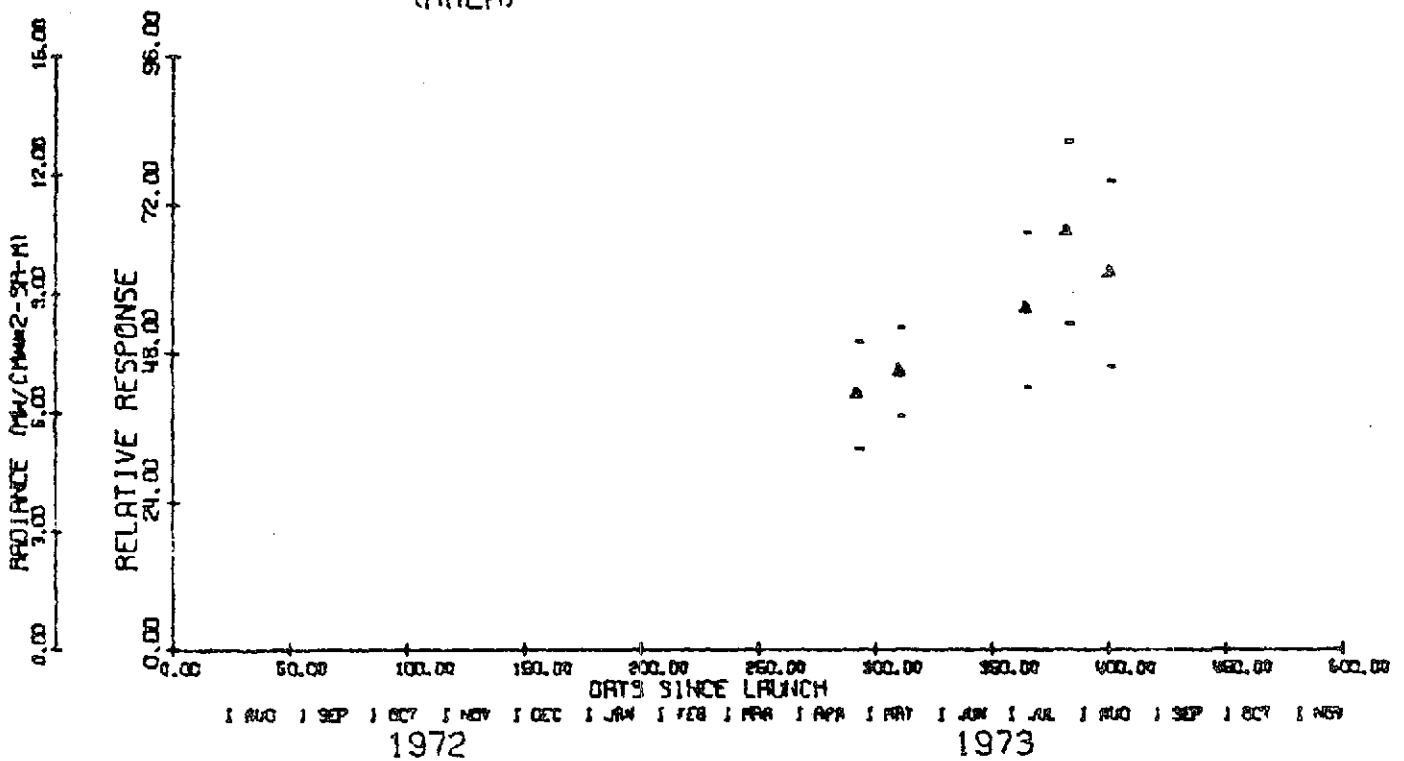
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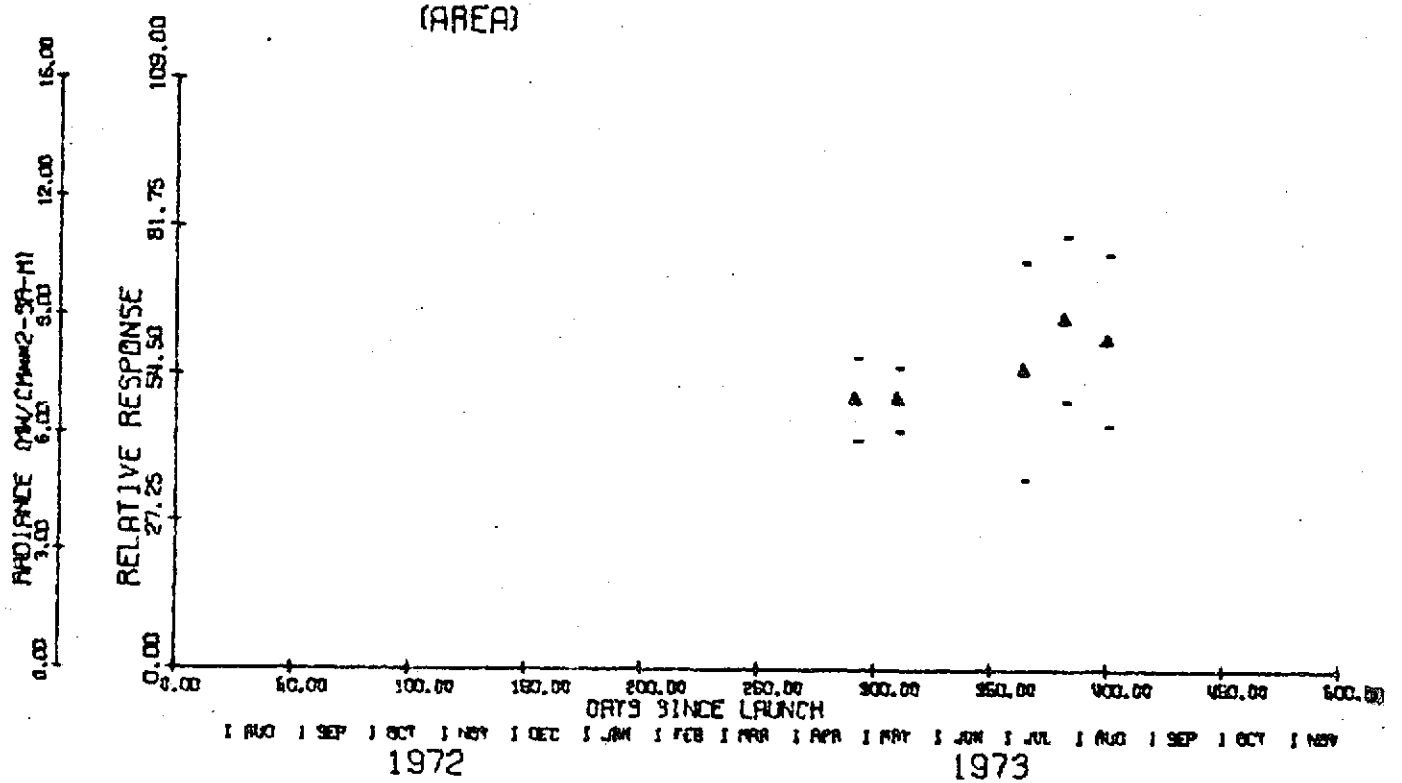
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(AREA)



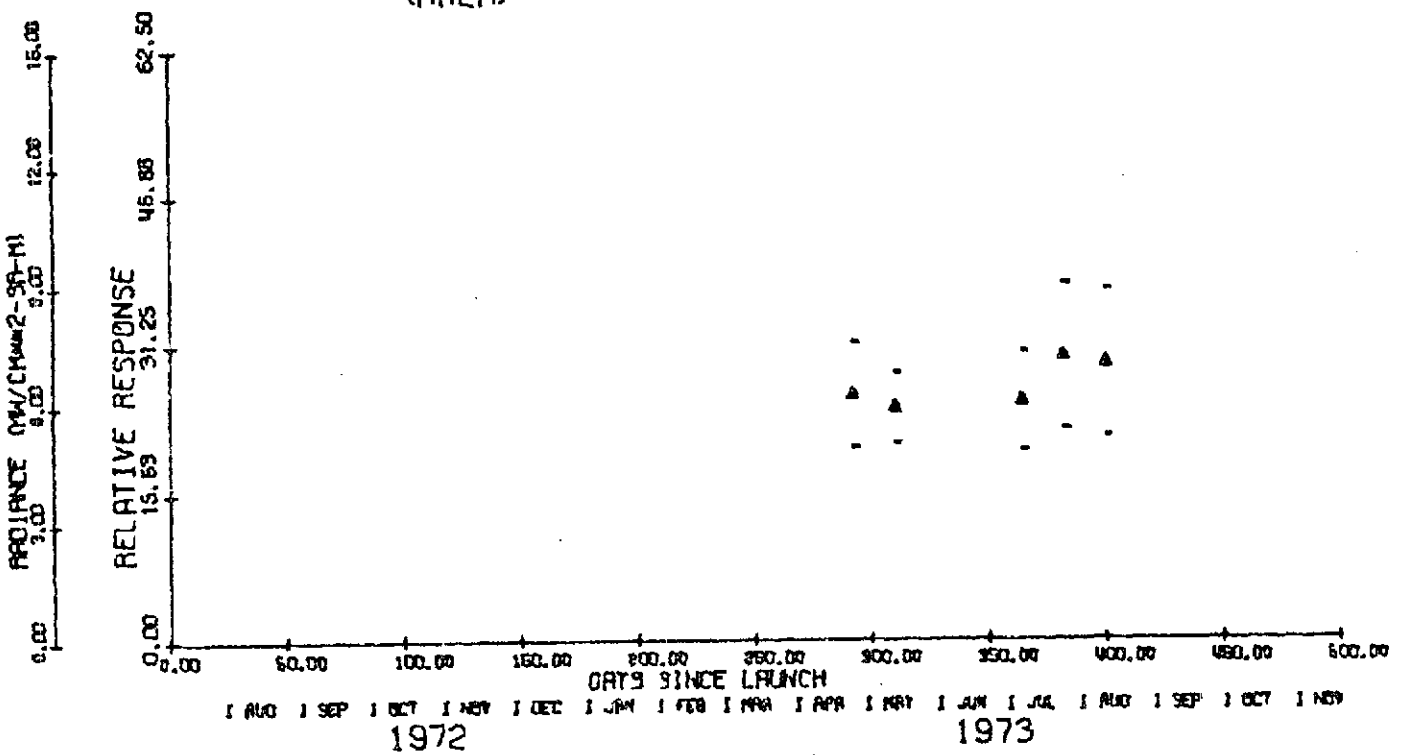
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BICKLETON, WA.
(AREA)



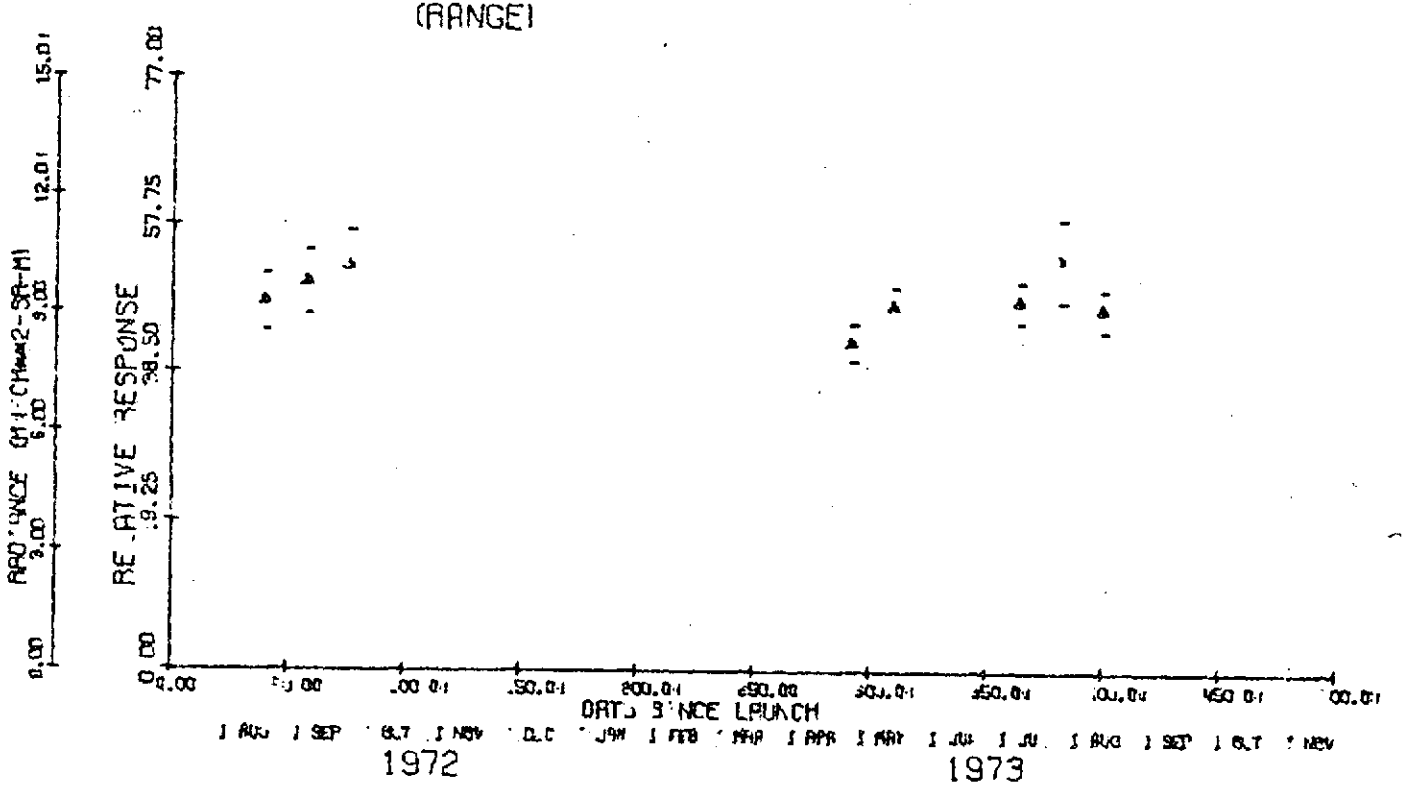
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BICKLETON, WA.
(AREA)



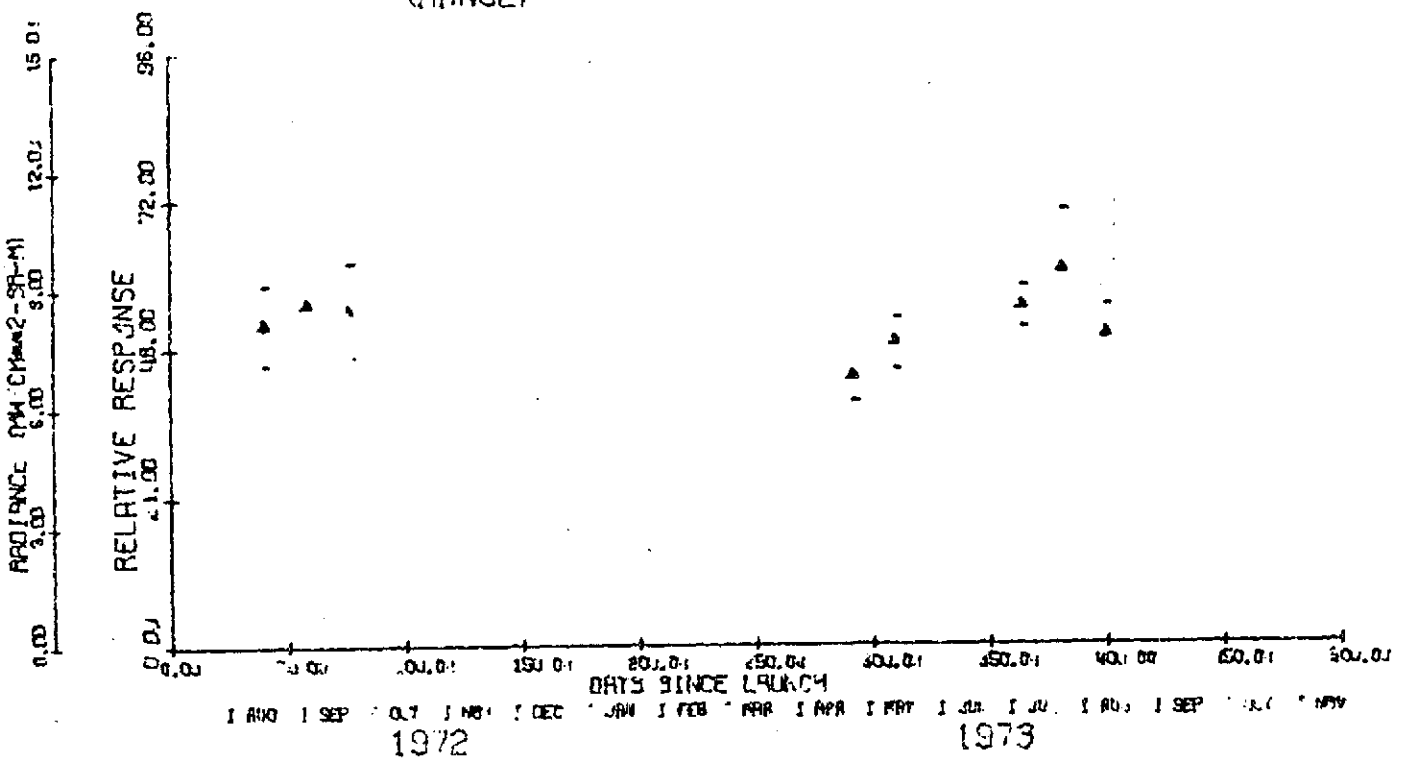
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
BICKLETON, WA.
(AREA)



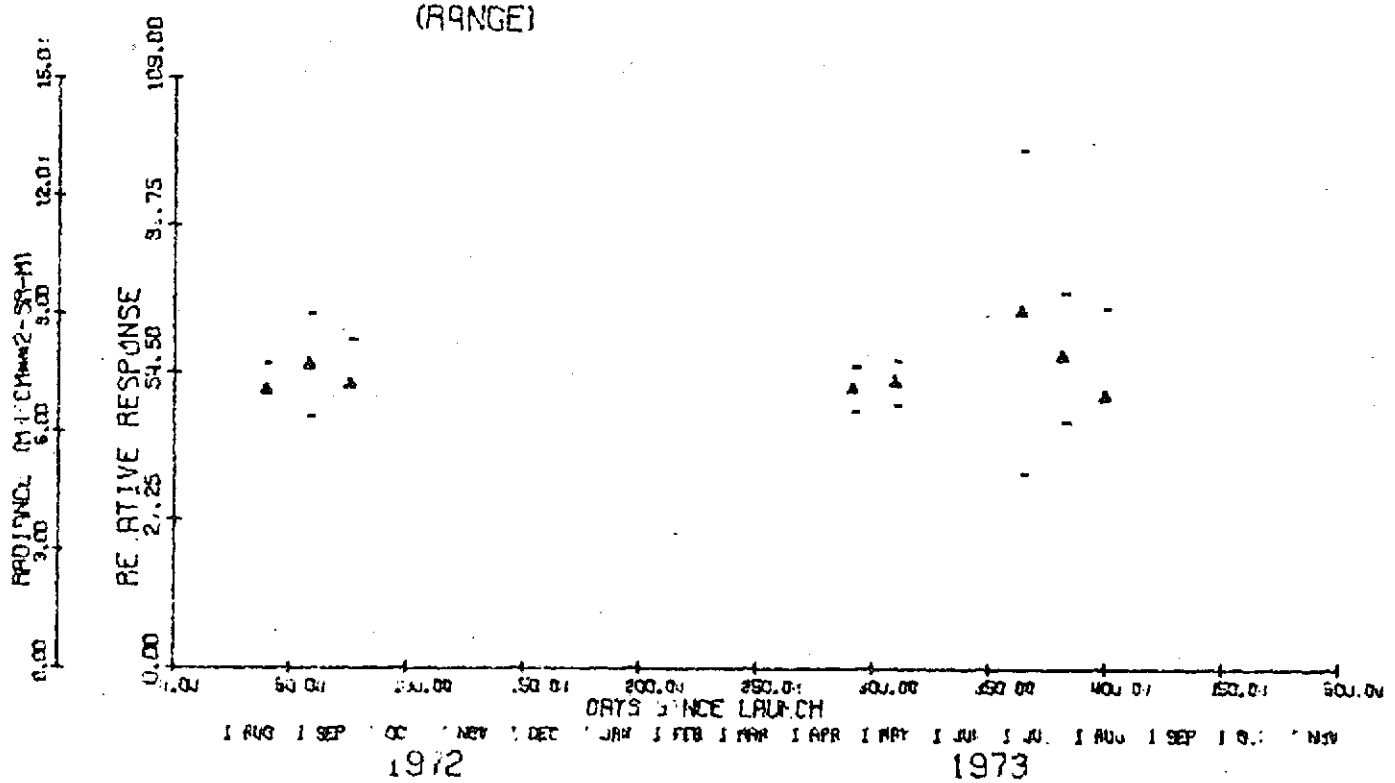
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
BICKLETON, WA
(RANGE)



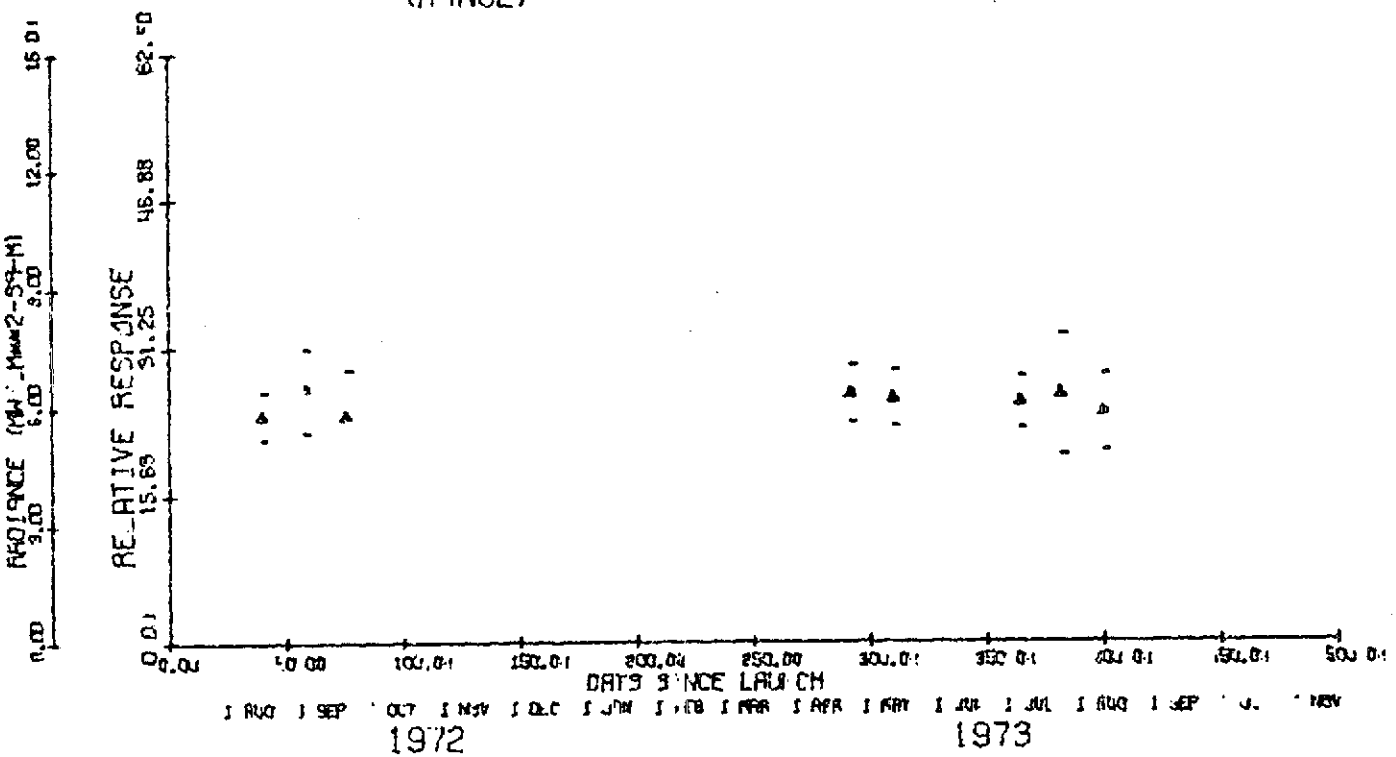
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
BICKLETON, WA.
(RANGE)



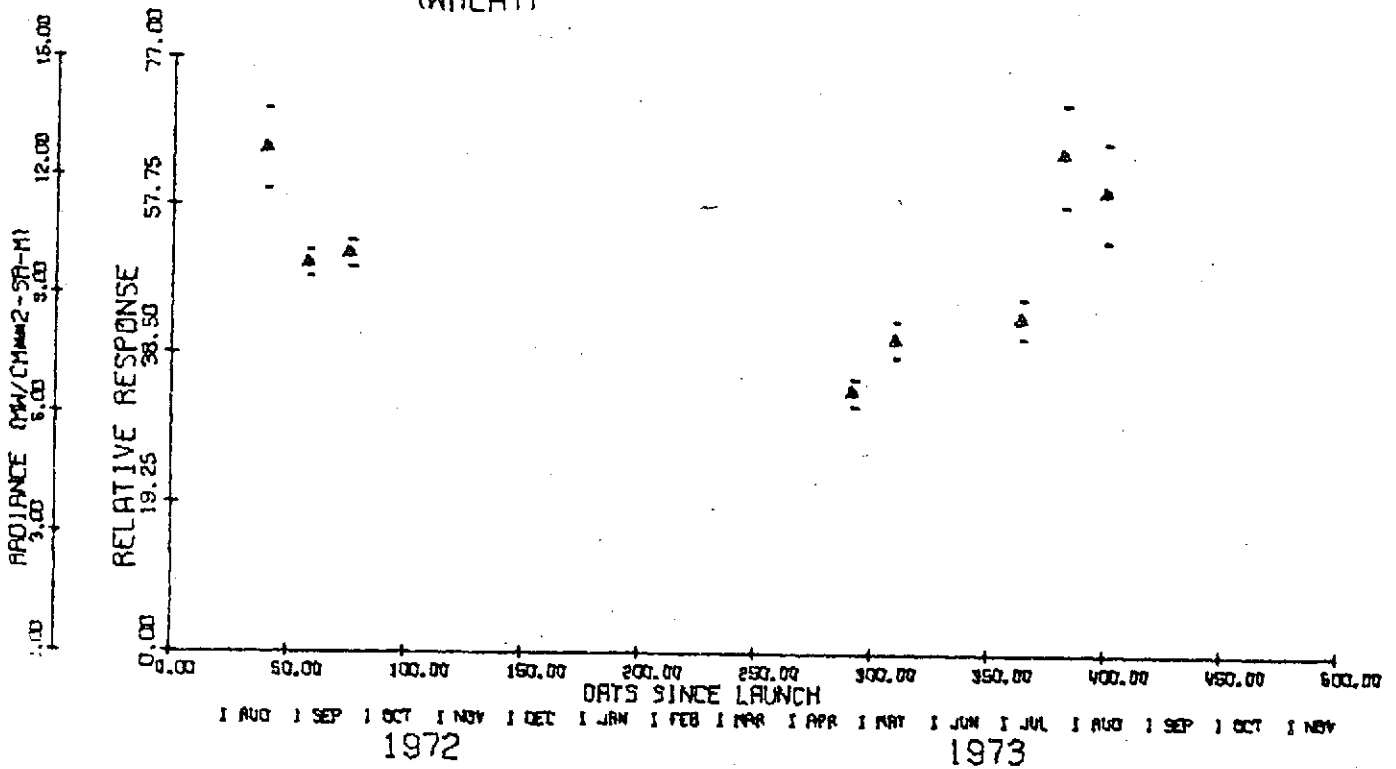
ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BICKLETON, WA.
(RANGE)

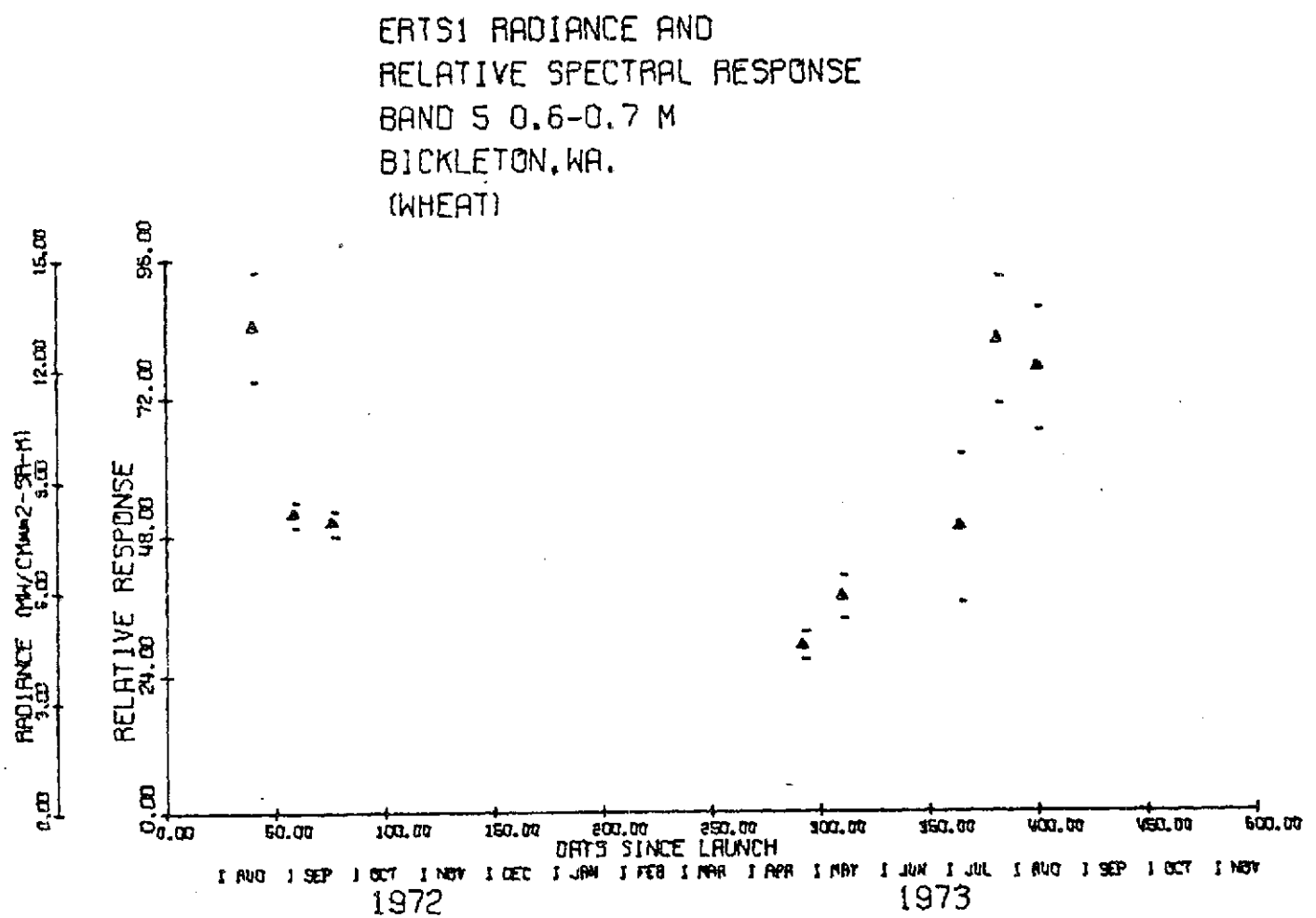


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0 8-1.1 M
BICKLETON, WA
(RANGE)

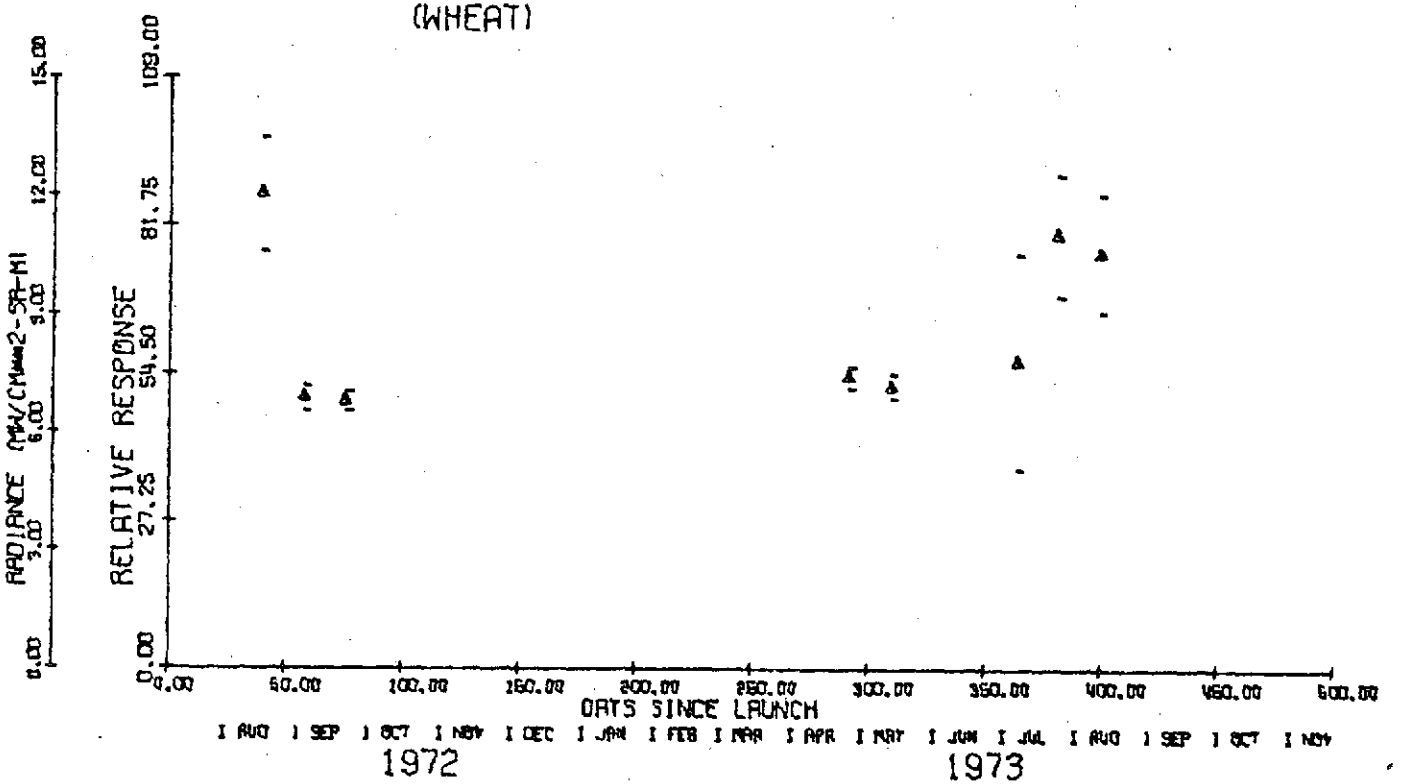


ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 4 0.5-0.6 M
BICKLETON, WA.
(WHEAT)

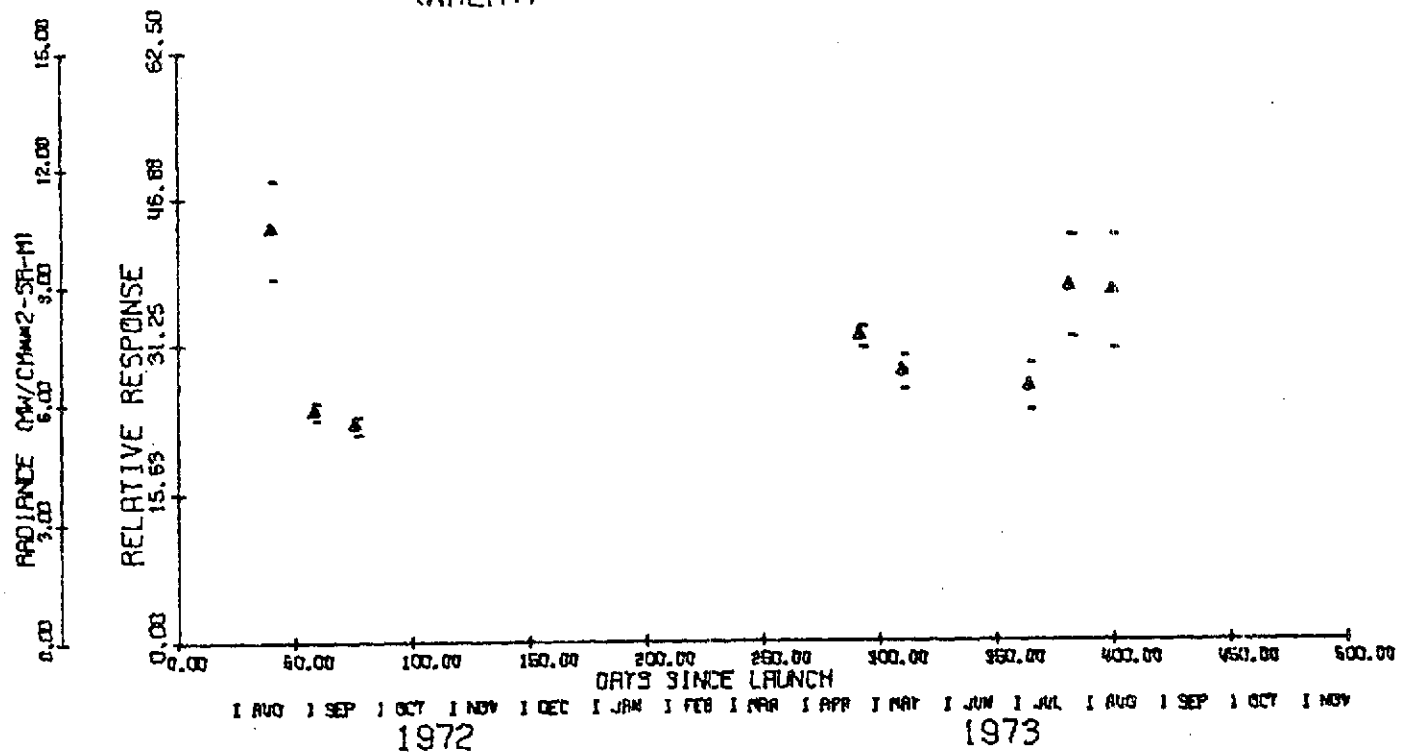



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 5 0.6-0.7 M
BICKLETON, WA.
(WHEAT)
RADIANCE (MW/CM**2-SR-M)
0.00
3.00
6.00
9.00
12.00
15.00
RELATIVE RESPONSE
0.00
24.00
48.00
72.00
96.00
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
400.00
450.00
500.00
DAYS SINCE LAUNCH
AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV
1972
1973

ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 6 0.7-0.8 M
BICKLETON, WA.
(WHEAT)



ERTS1 RADIANCE AND
RELATIVE SPECTRAL RESPONSE
BAND 7 0.8-1.1 M
BICKLETON, WA.
(WHEAT)



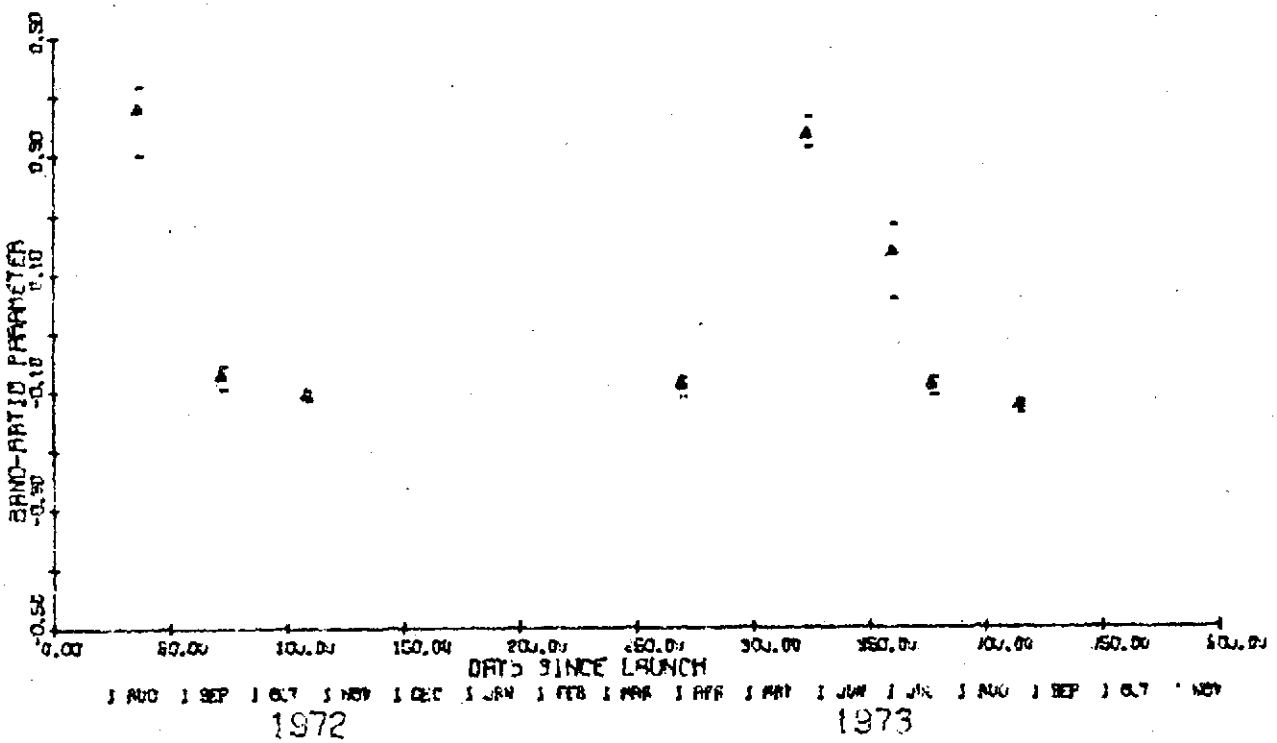
# APPENDIX J

## BAND RATIO PARAMETER GRAPHS FOR WESTERN CORRIDORS

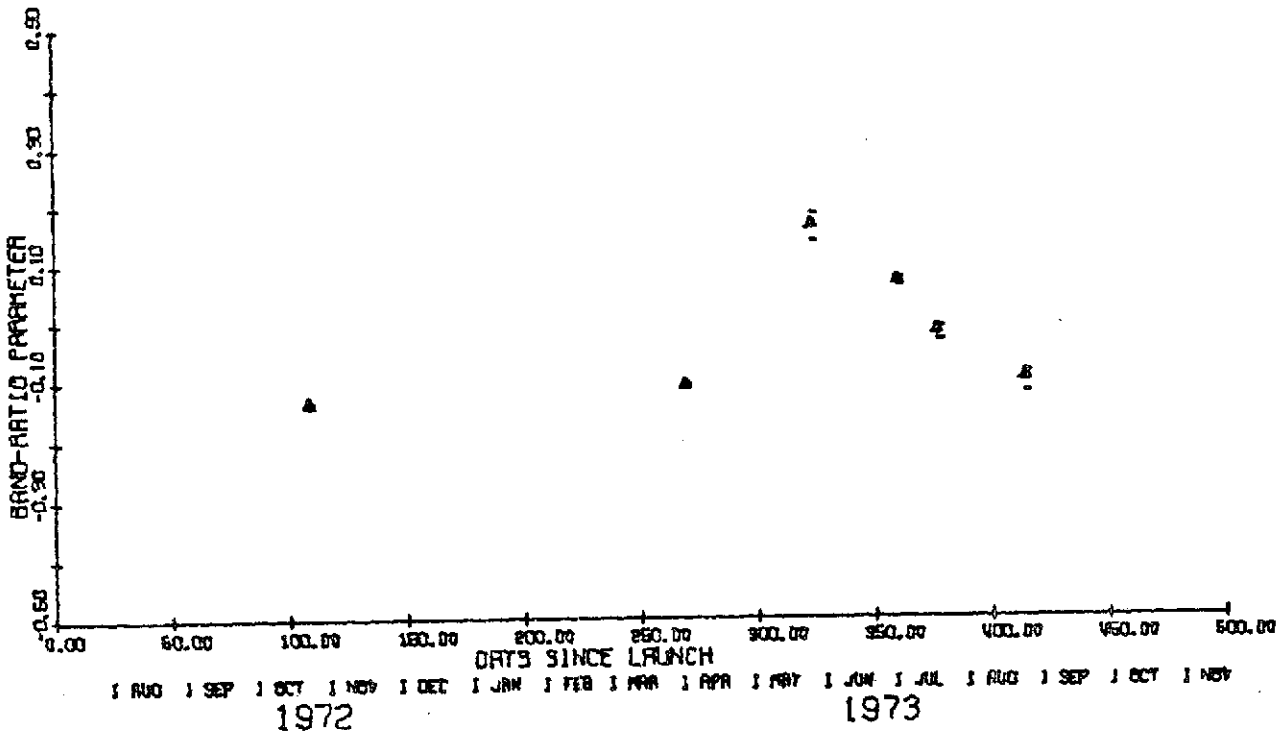
ROCKY MOUNTAIN CORRIDOR

Browning, MT
48°44'N, 113°11'W

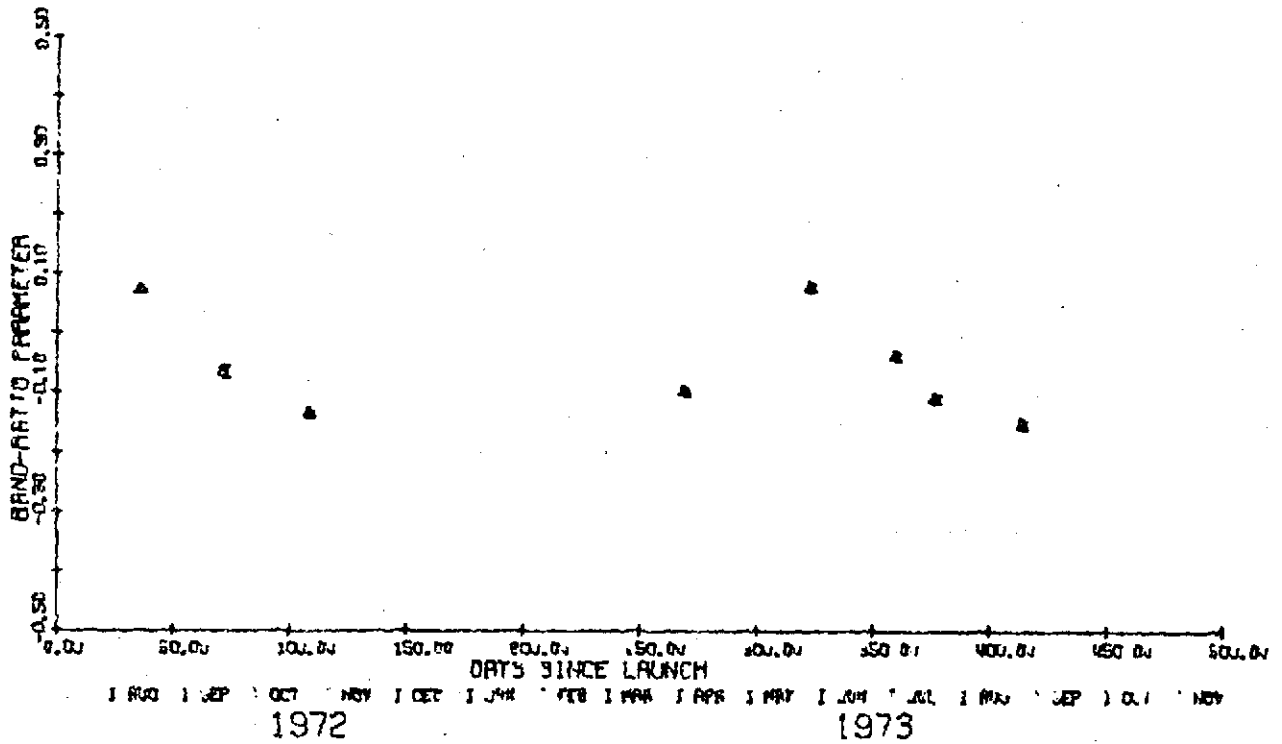
ERTS1
BAND-RATIO PARAMETER
BROWNING, MT.
(ALFALFA)



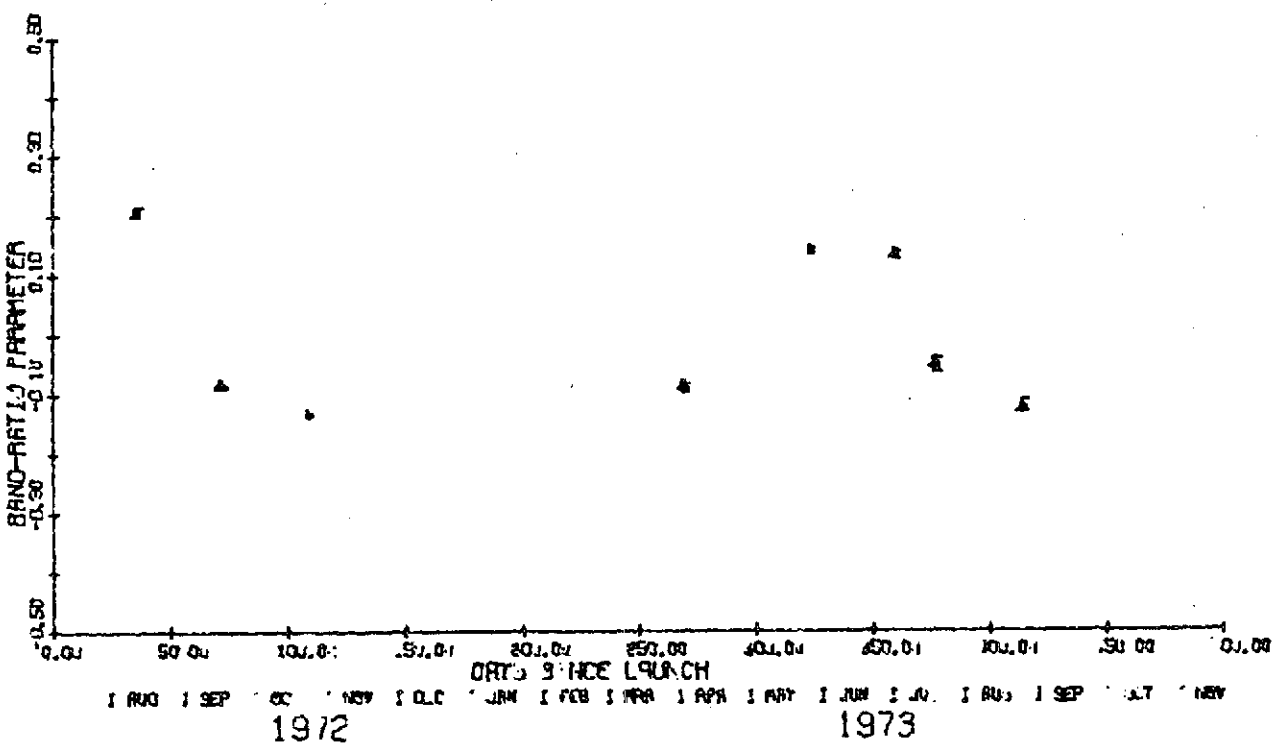
ERTS1
BAND-RATIO PARAMETER
BROWNING, MT.
(AREA)



ERTS1
BAND-RATIO PARAMETER
BROWNING, MT
(RANGE)



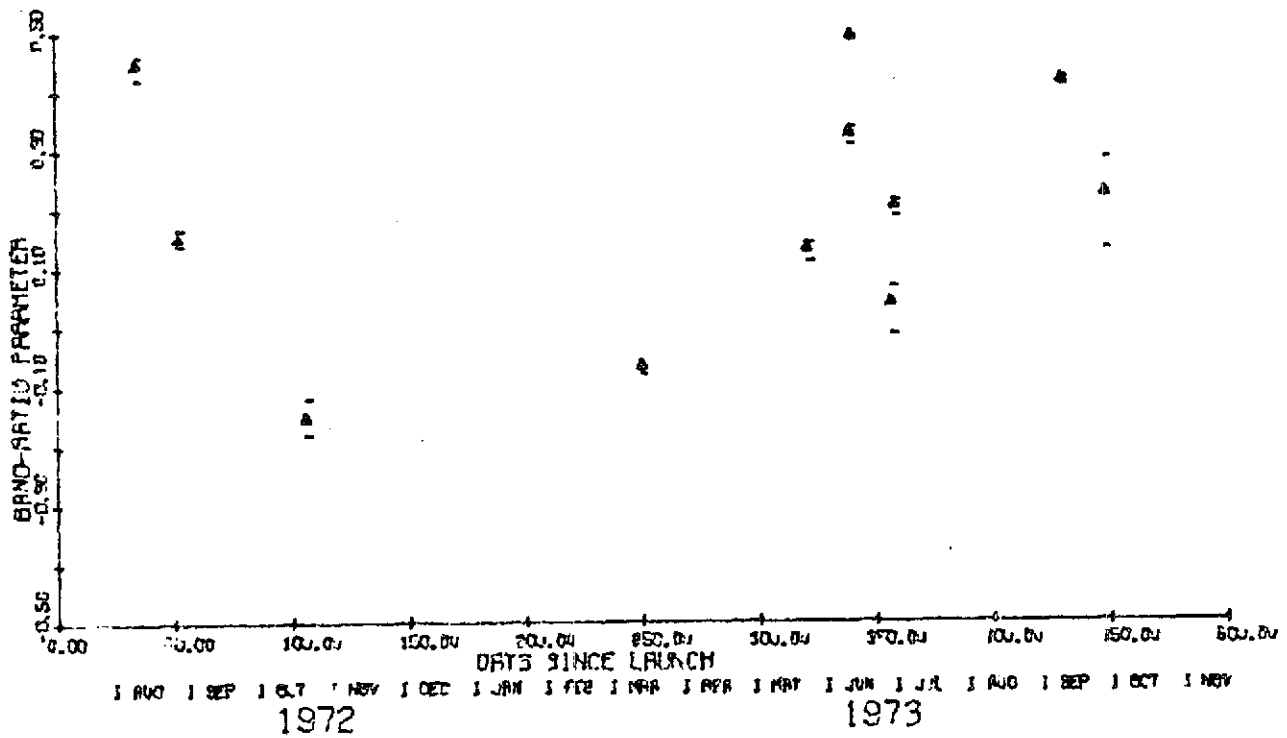
ERTS1
BAND-RATIO PARAMETER
BROWNING, MT.
(WHEAT)



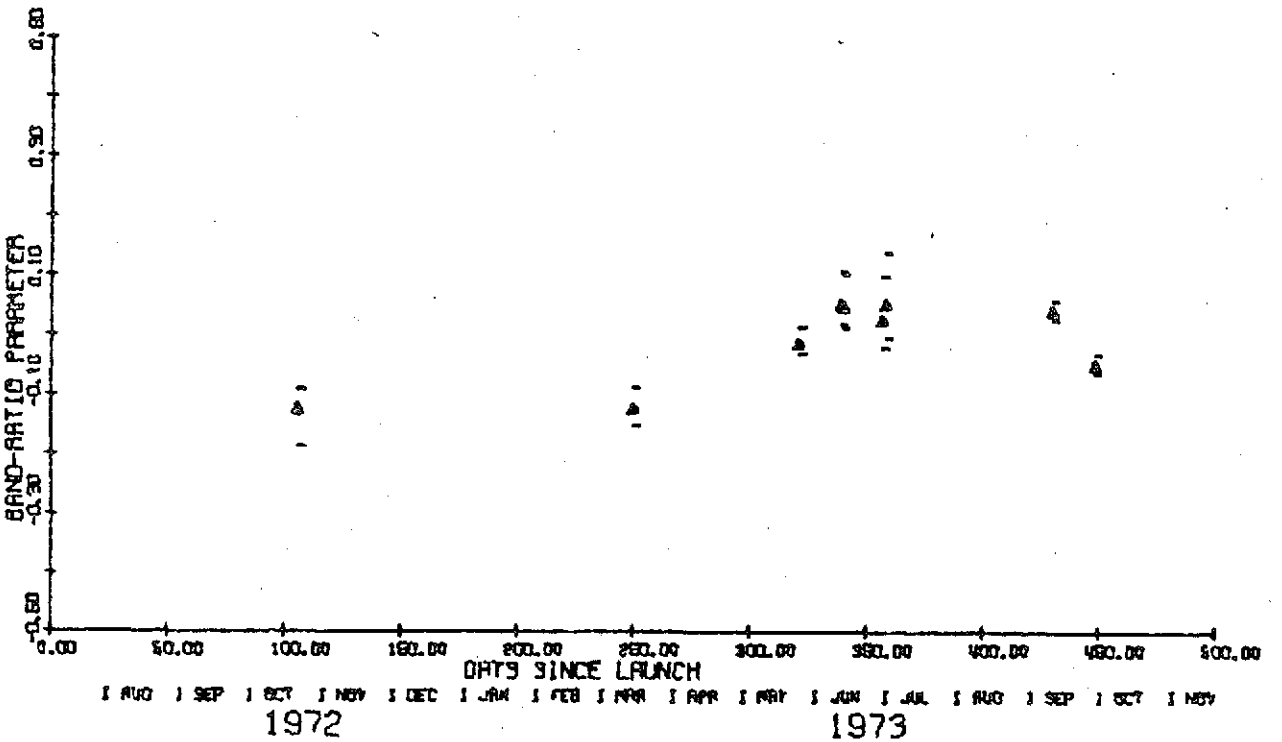
ROCKY MOUNTAIN CORRIDOR

Logan, MT
45°47'N, 111°27'W

ERTS1
BAND-RATIO PARAMETER
LOGAN, MT.
(ALFALFA)



ERTS1
BAND-RATIO PARAMETER
LOGAN, MT.
(AREA)

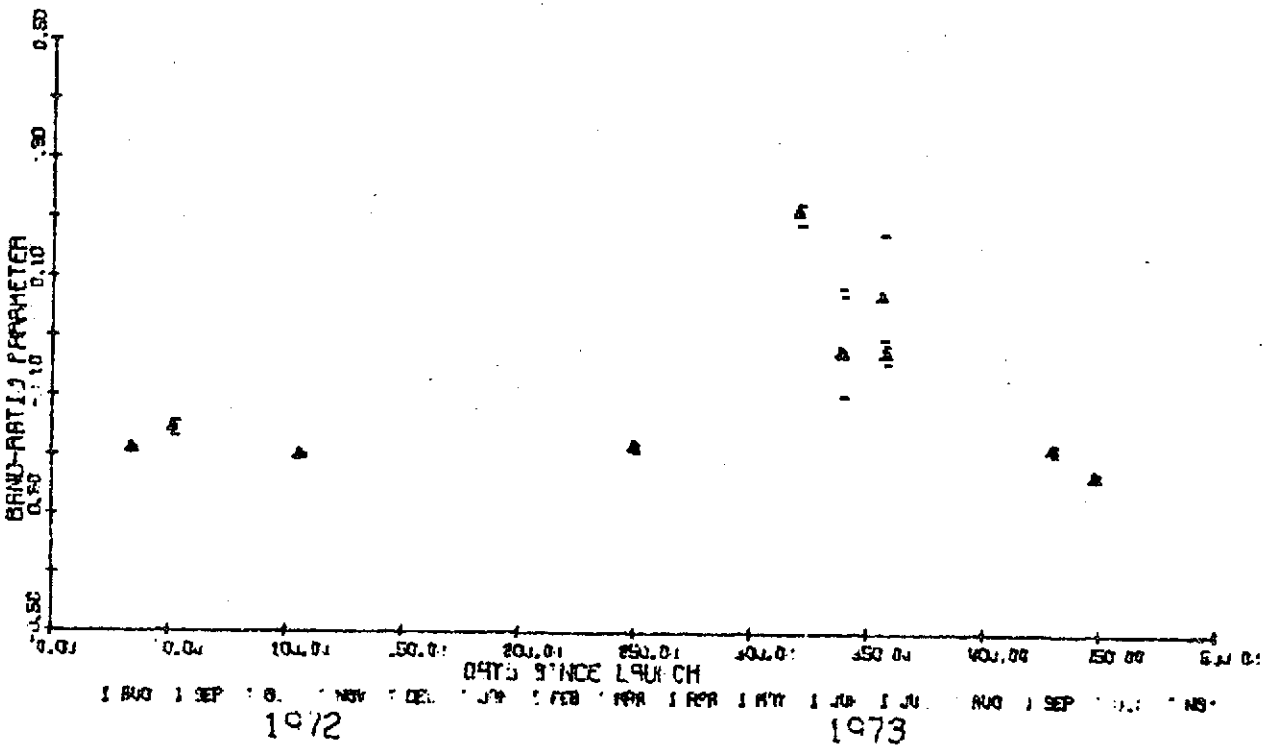


ORIGINAL PAGE IS
OF POOR QUALITY



ERTS1
BAND-RATIO PARAMETER
LOGAN MT
(RANGE)

ERTS1
BAND RATIO PARAMETER
LOGAN, MT.
(WHEAT)



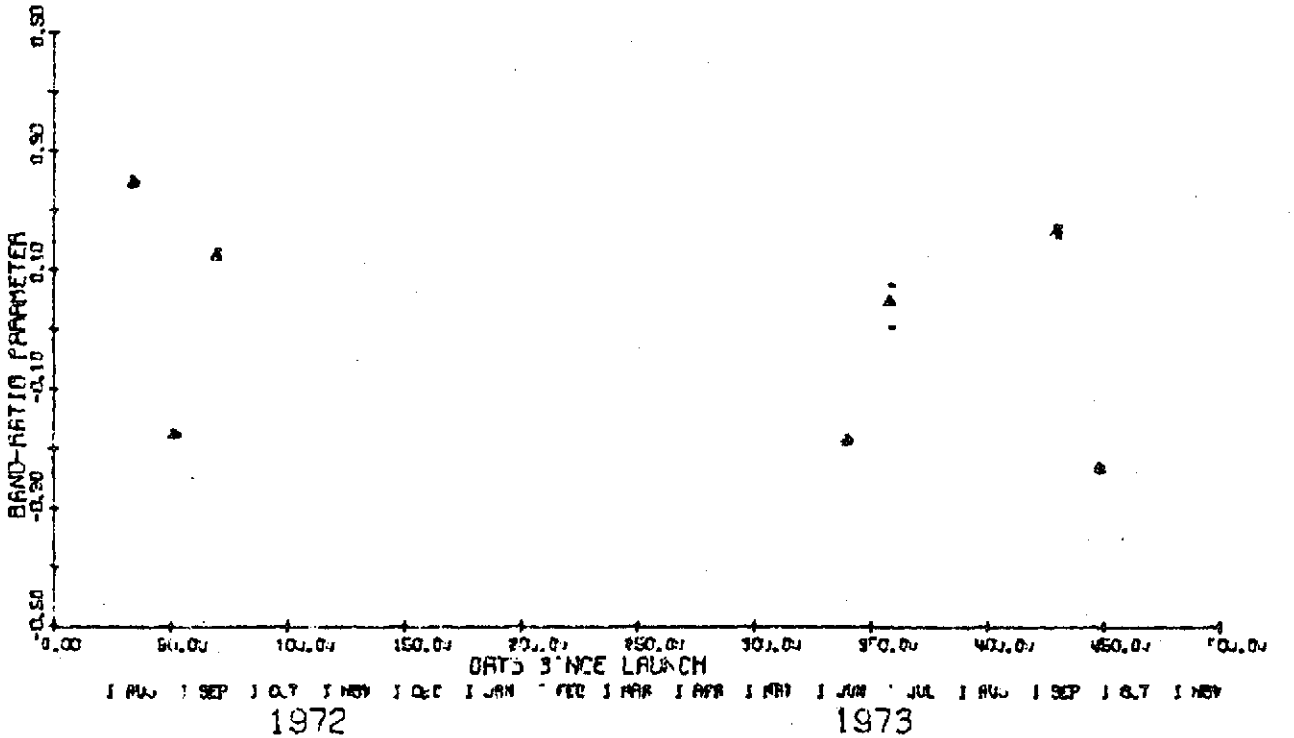
ROCKY MOUNTAIN CORRIDOR

Camas, ID
43°58'N, 112°18'W

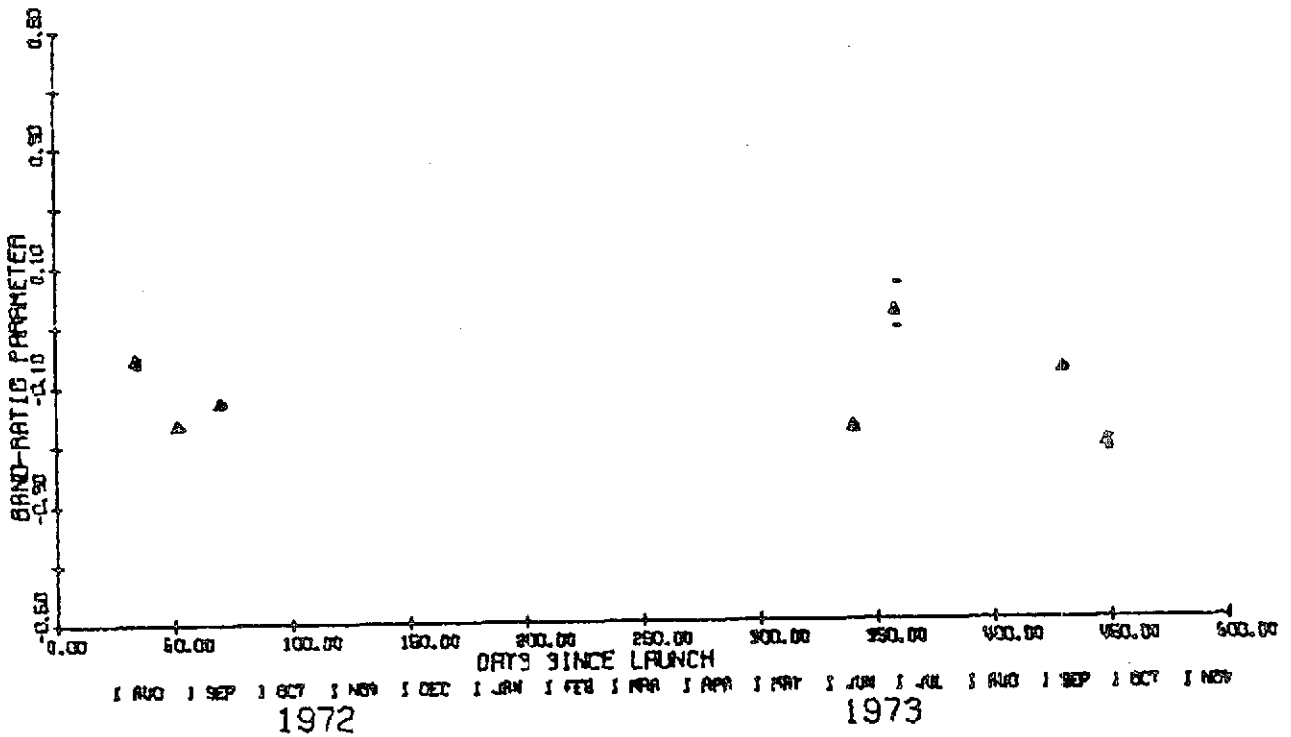
ORIGINAL PAGE IS
OF POOR QUALITY



ERTS1
BAND-RATIO PARAMETER
CAMAS, ID.
(ALFALFA)



ERTS1
BAND-RATIO PARAMETER
CAMAS, ID.
(AREA)

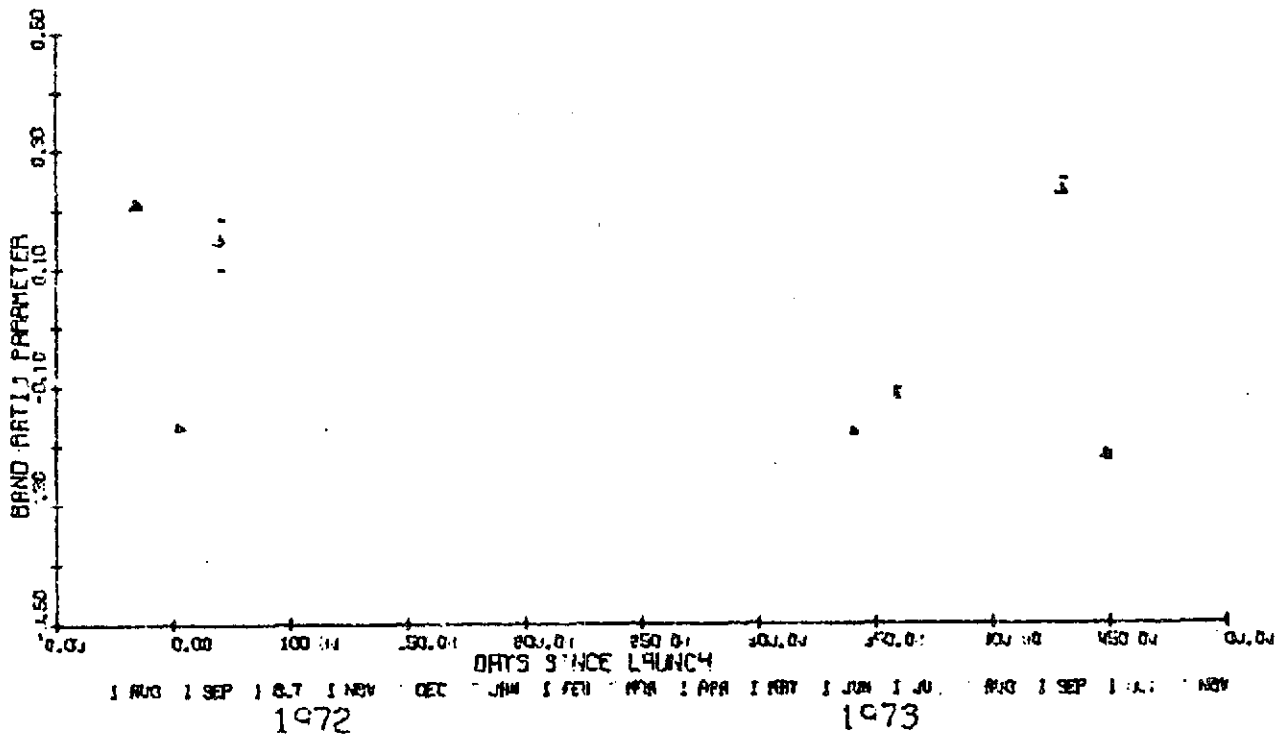


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OF POOR QUALITY



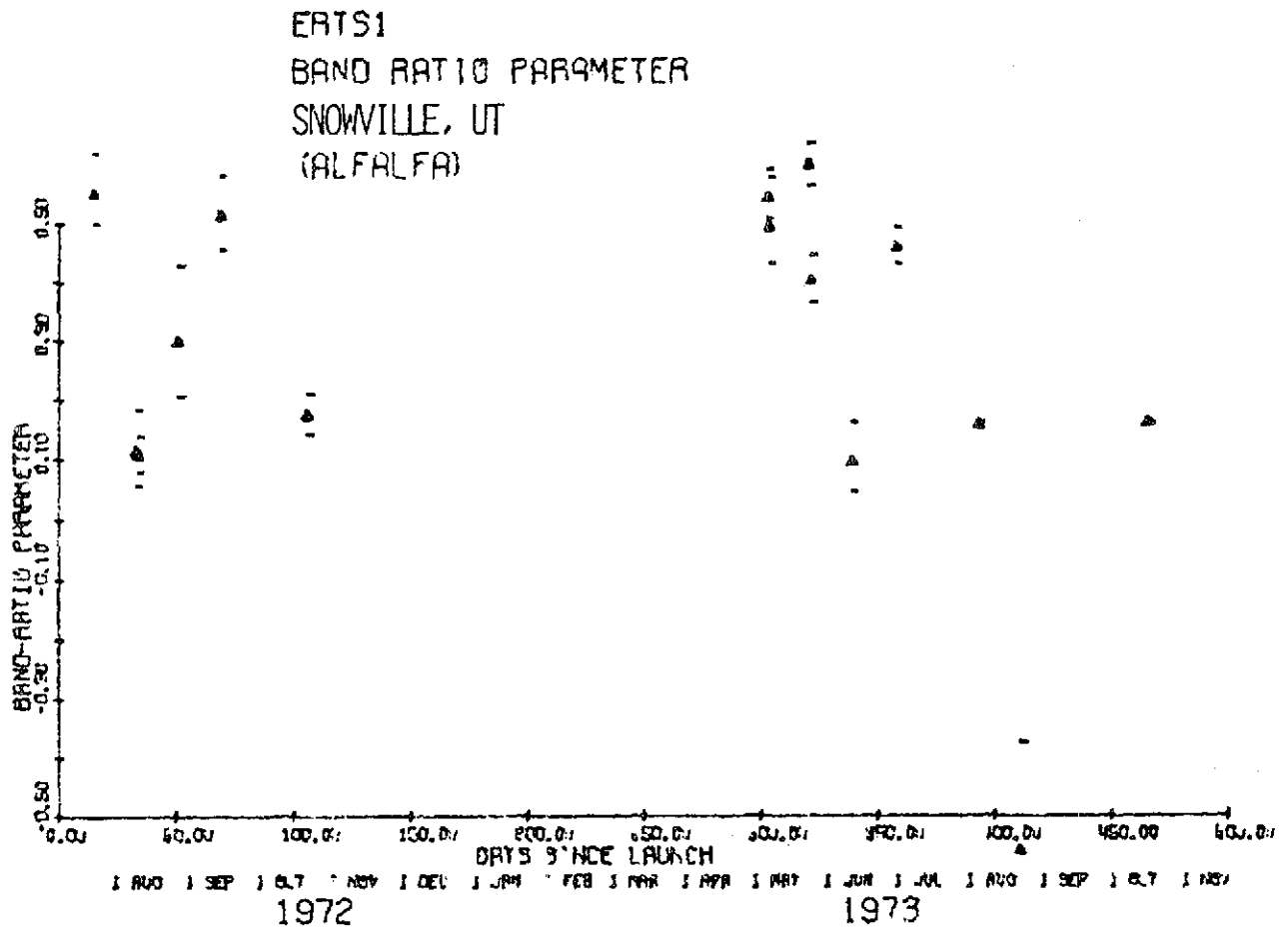
ERTS1
BAND-RATIO PARAMETER
CAMAS, ID
(RANGE)

ERTS1
BAND-RATIO PARAMETER
CAMAS, ID.
(WHEAT)

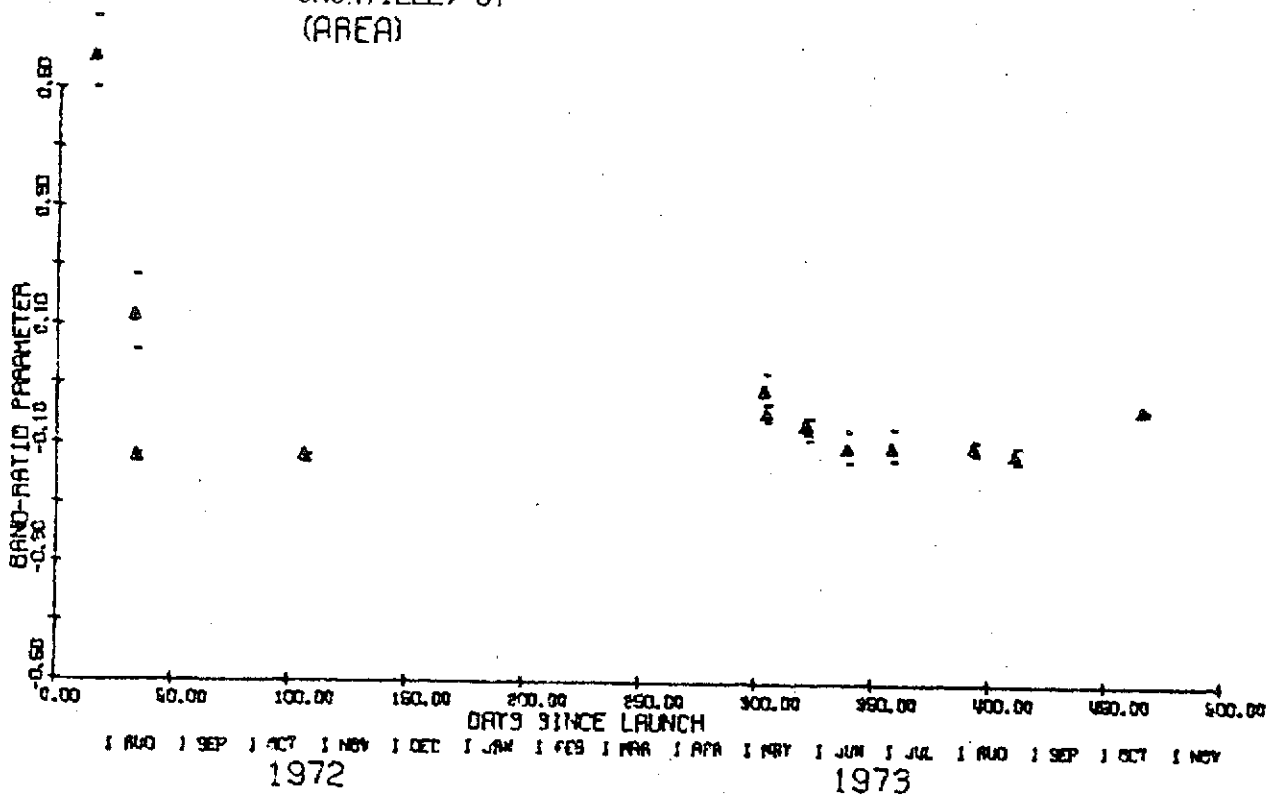


ROCKY MOUNTAIN CORRIDOR

Snowville, UT
41°59'N, 112°39'W


ERTS1
BAND RATIO PARAMETER
SNOWVILLE, UT
(ALFALFA)
BAND-RATIO PARAMETER
0.50
0.30
0.10
-0.10
-0.30
-0.50
0.0
50.0
100.0
150.0
200.0
250.0
300.0
350.0
400.0
450.0
500.0
DAYS SINCE LAUNCH
AUG
SEP
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
1972
1973

ERTS1
BAND-RATIO PARAMETER
SNOWVILLE, UT
(AREA)

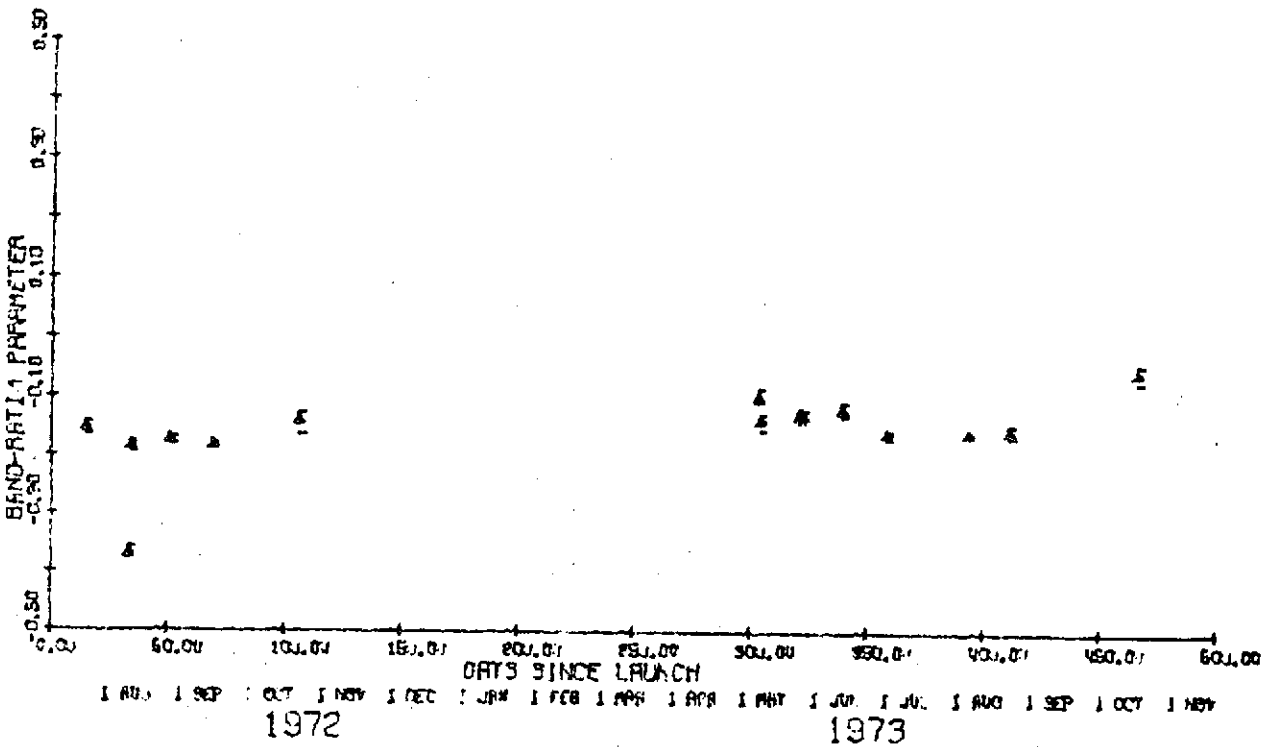


ORIGINAL PAGE IS
OF POOR QUALITY



ERTS1
BAND RATIO PARAMETER
SNOWVILLE, UT
(RANGE)

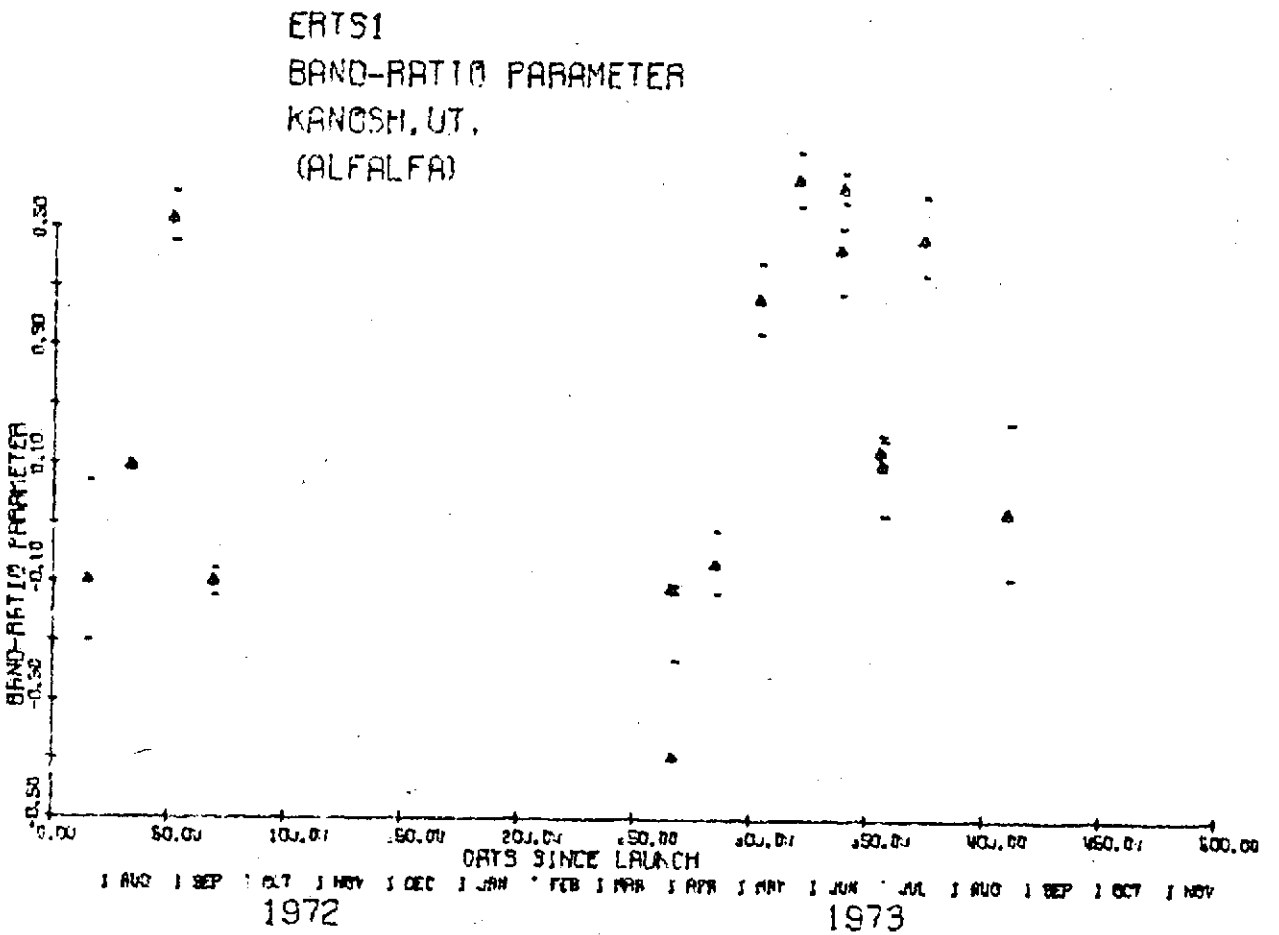
ERTS1
BAND-RATIO PARAMETER
SNOWVILLE, UT
(WHEAT)



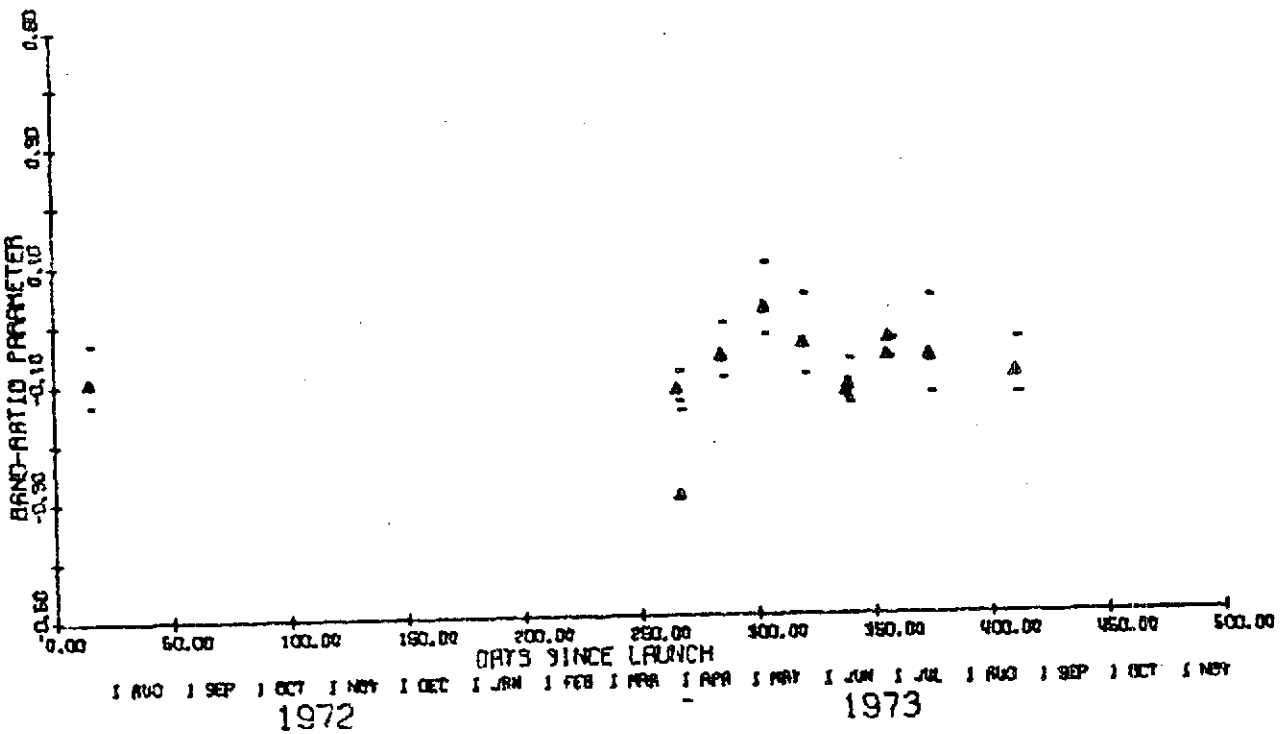
ROCKY MOUNTAIN CORRIDOR

Kanosh, UT

38°49'N, 112°33'W


ERTS1
BAND-RATIO PARAMETER
KANOSH, UT.
(ALFALFA)
BAND-RATIO PARAMETER
0.50
0.30
0.10
-0.10
-0.30
-0.50
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
400.00
DAYS SINCE LAUNCH
AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV
1972
1973

ERTS1
BAND-RATIO PARAMETER
KANOSH, UT.
(AREA)

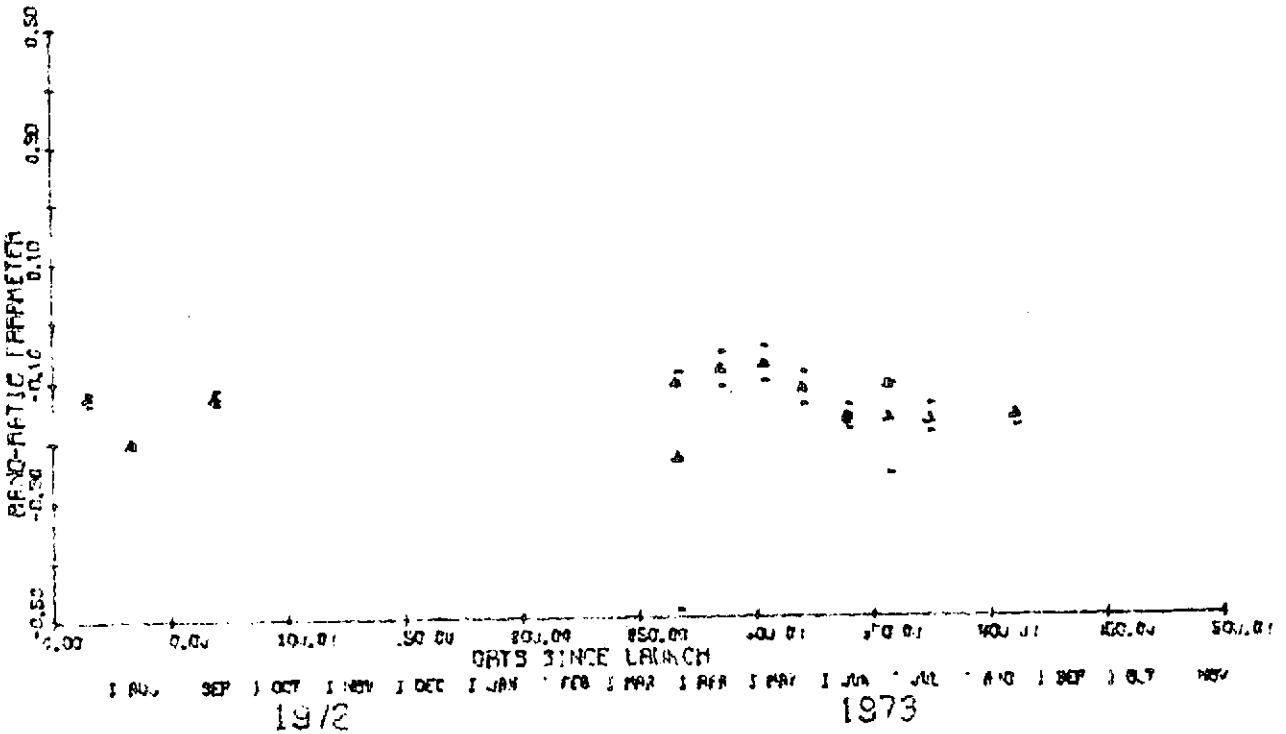


ORIGINAL PAGE IS
OF POOR QUALITY

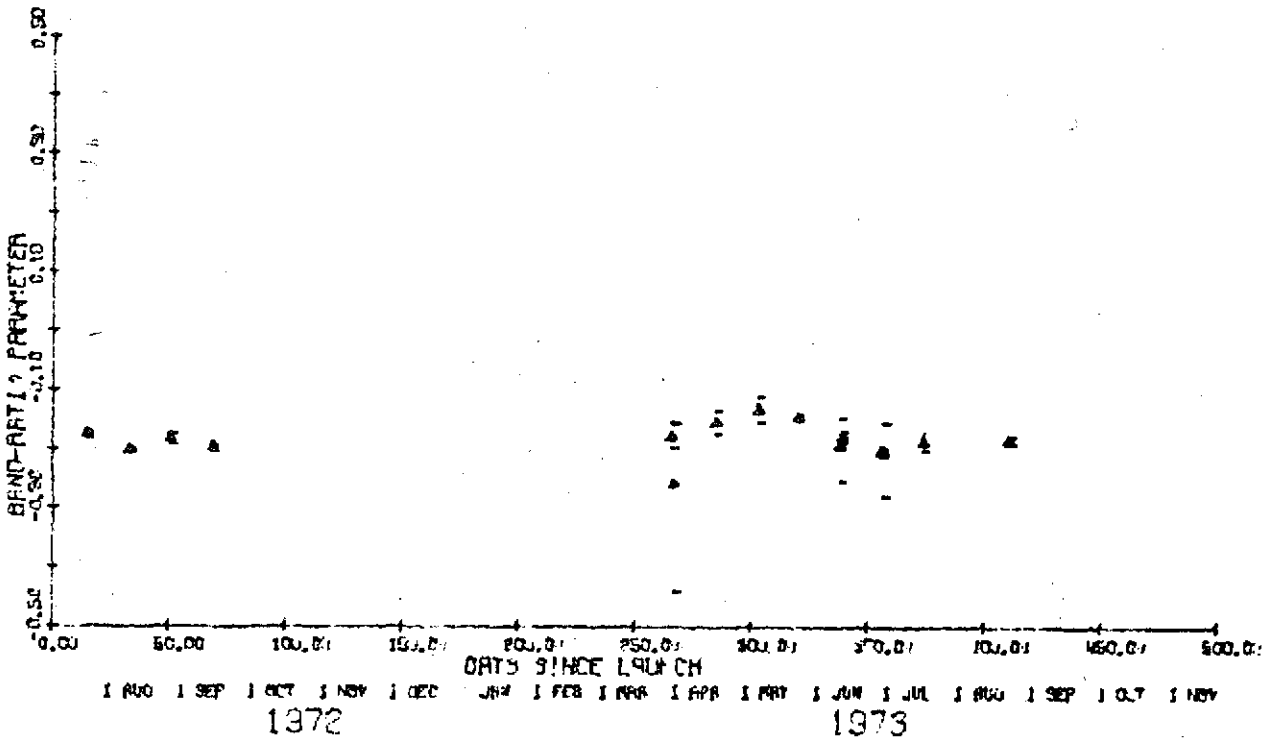
723

ERTS1
BAND RATIO PARAMETER
KANOSH UT.
(RANGE 1)

ERTS1
BAND-RATIO PARAMETER
KANOSH UT
(RANGE 2)



ERTS1
BAND-RATIO PARAMETER
KANOSH, UT
(WHEAT)



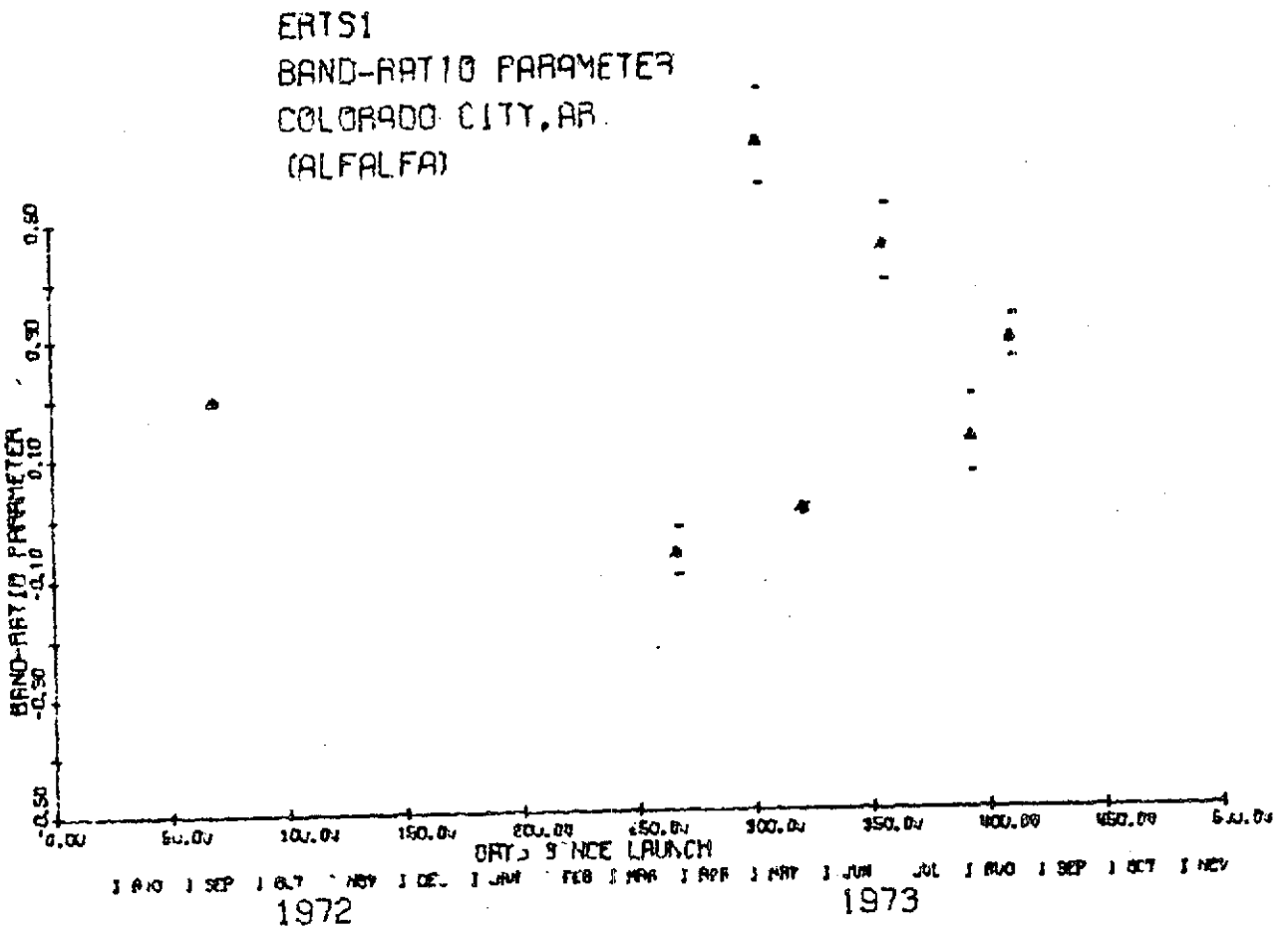
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ROCKY MOUNTAIN CORRIDOR

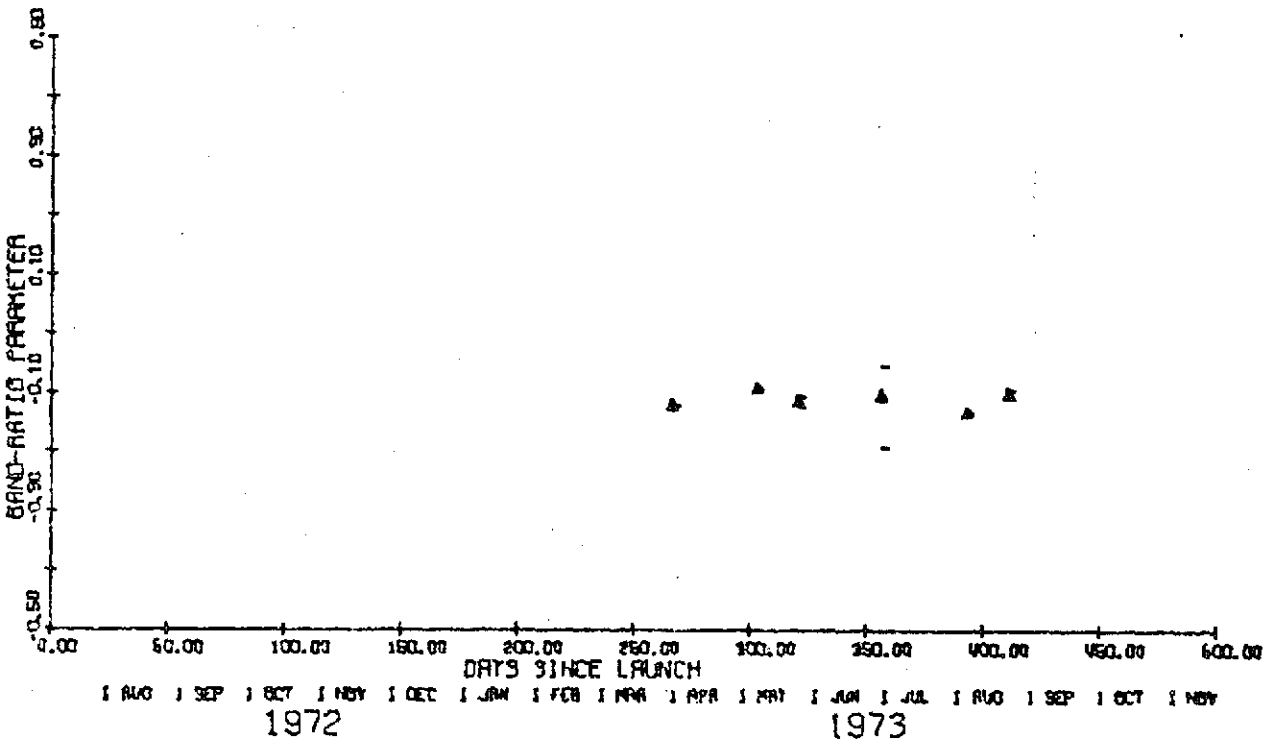
Colorado City, AR
36°59'N, 112°59'W



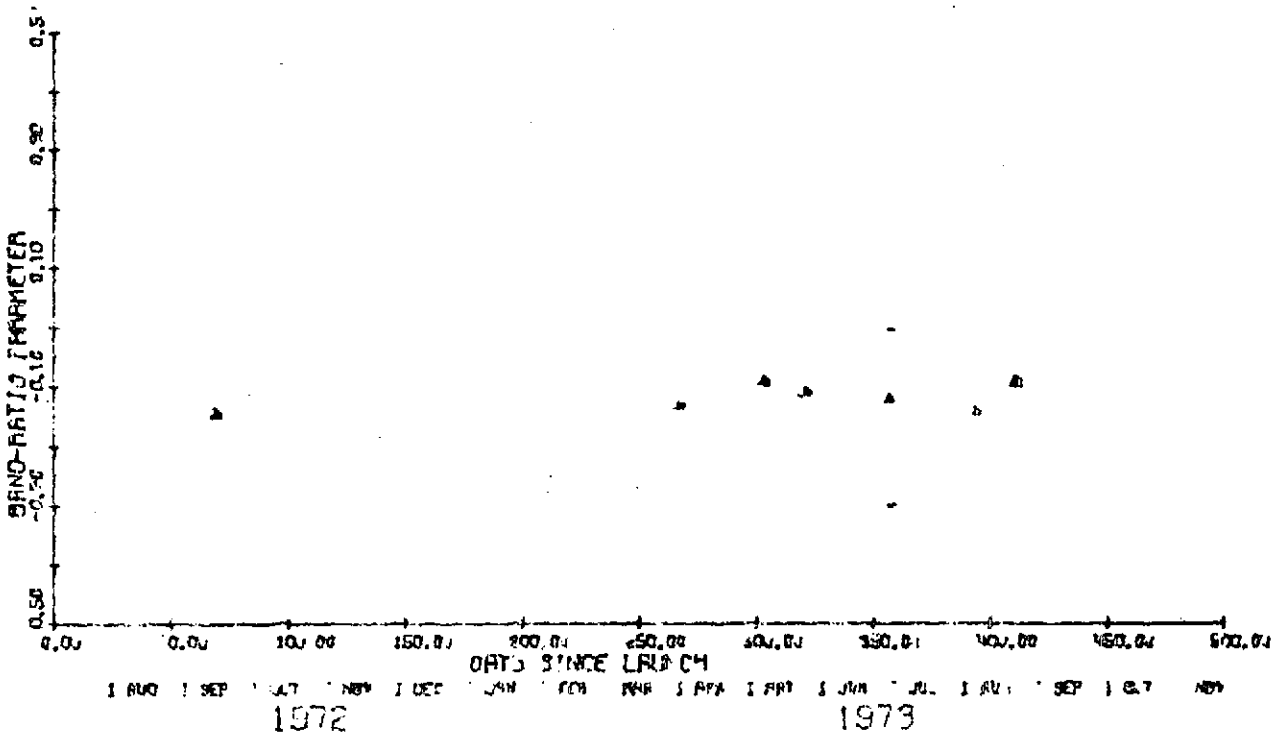
PRECEDING PAGE BLANK NOT FILMED


ERTS1
BAND-RATIO PARAMETER
COLORADO CITY, AR.
(ALFALFA)
BAND-RATIO PARAMETER
0.50
0.30
0.10
-0.10
-0.30
-0.50
0.00
50.00
100.00
150.00
200.00
250.00
300.00
350.00
400.00
450.00
500.00
DAYS SINCE LAUNCH
1972
1973

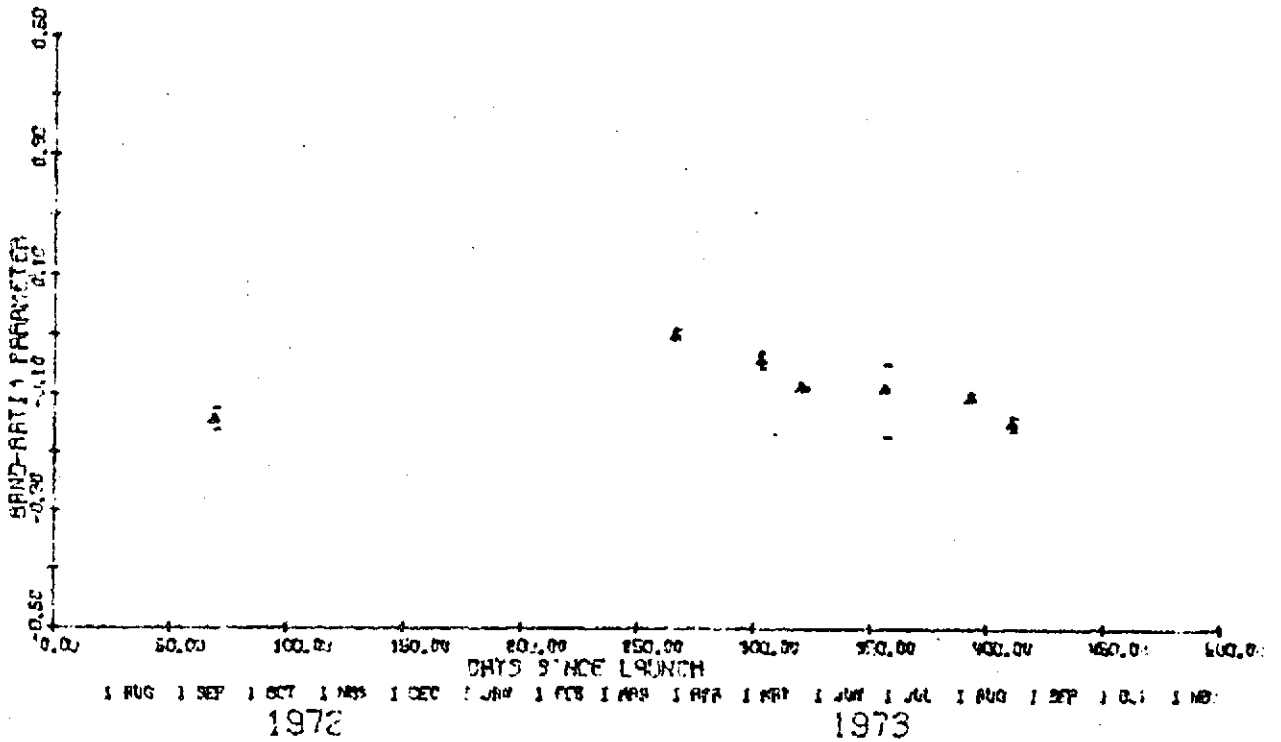
ERTS1
BAND-RATIO PARAMETER
COLORADO CITY, AR.
(AREA)



ERTS1
BAND-RATIO PARAMETER
COLORADO CITY, AR.
(RANGE)



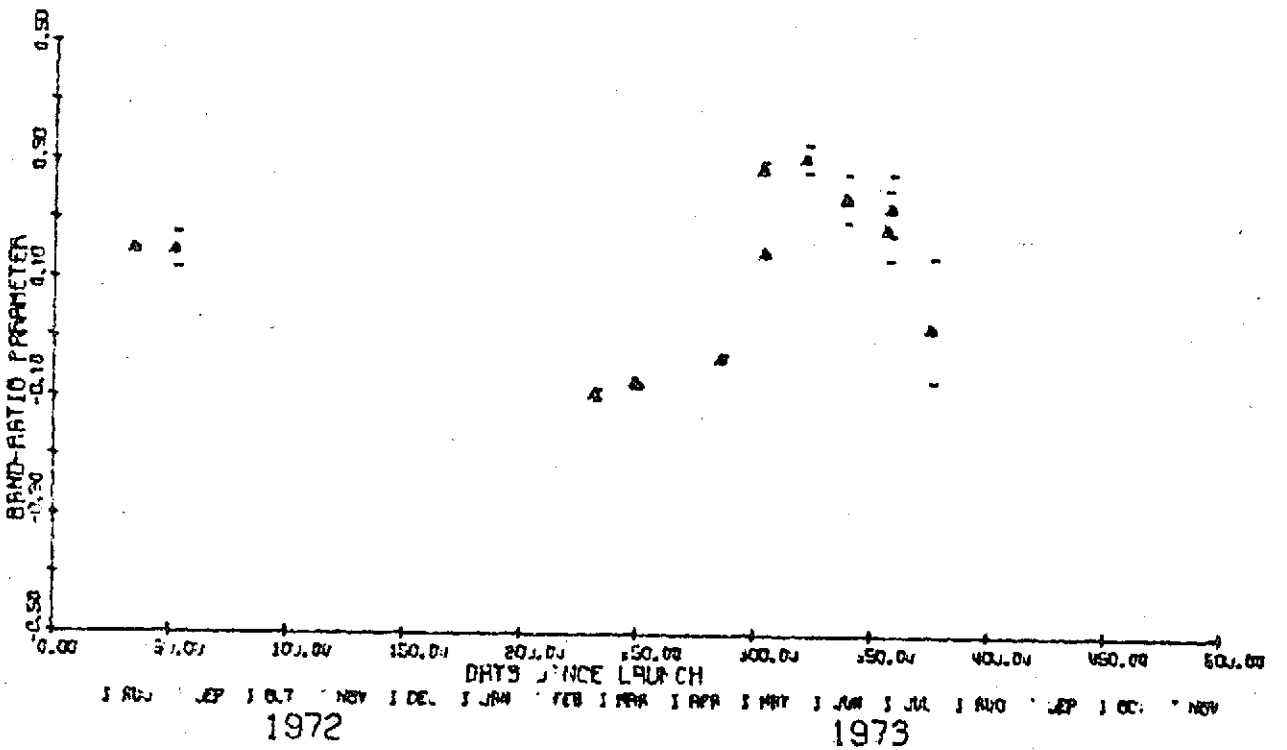
ERTS1
BAND-RATIO PARAMETER
COLORADO CITY, AR.
(WHEAT)



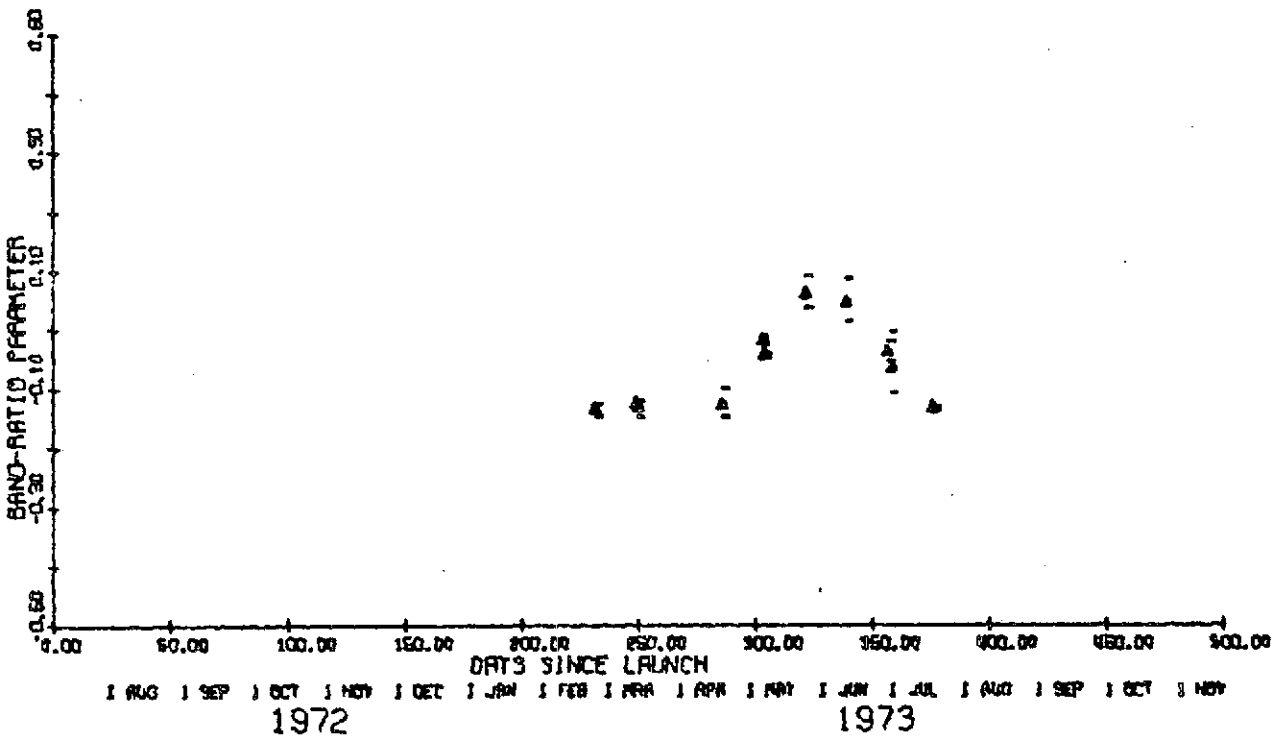
COLUMBIA VALLEY CORRIDOR

Havre, MT
48°27'N, 109°47'W

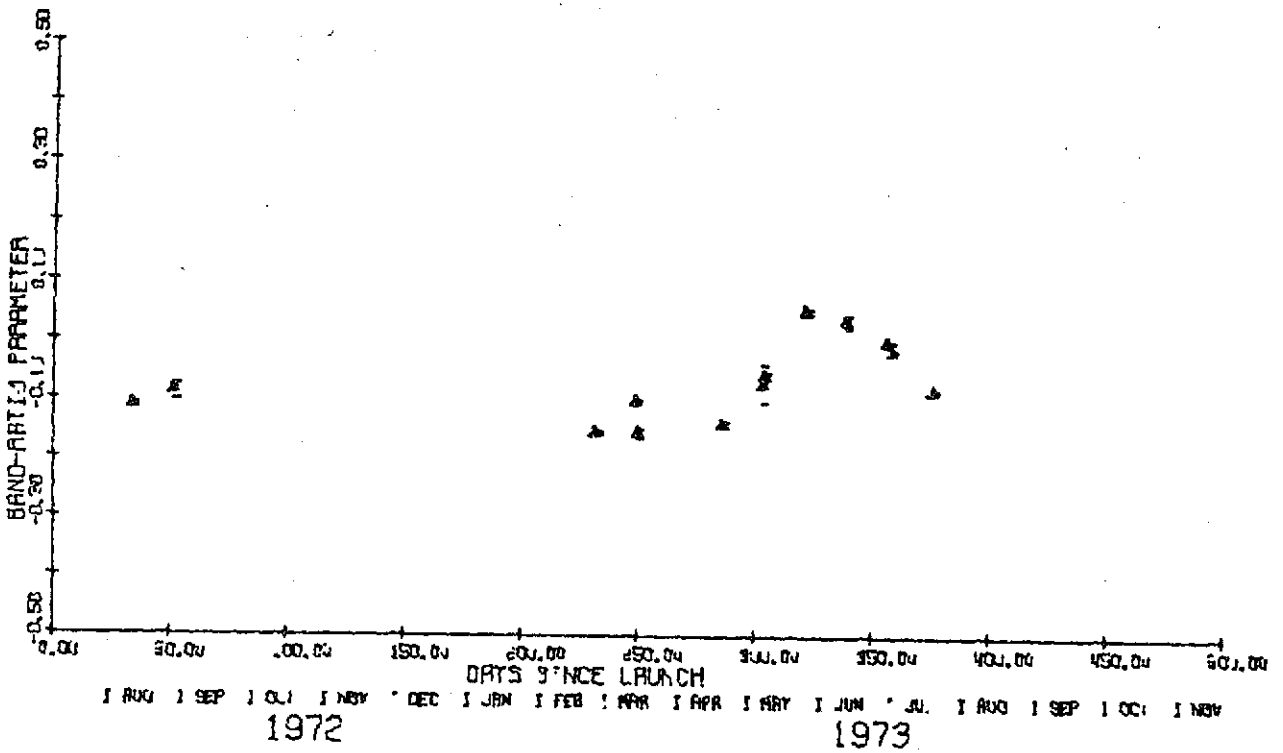
ERTS1
BAND-RATIO PARAMETER
HAVRE, MT
(ALFALFA)



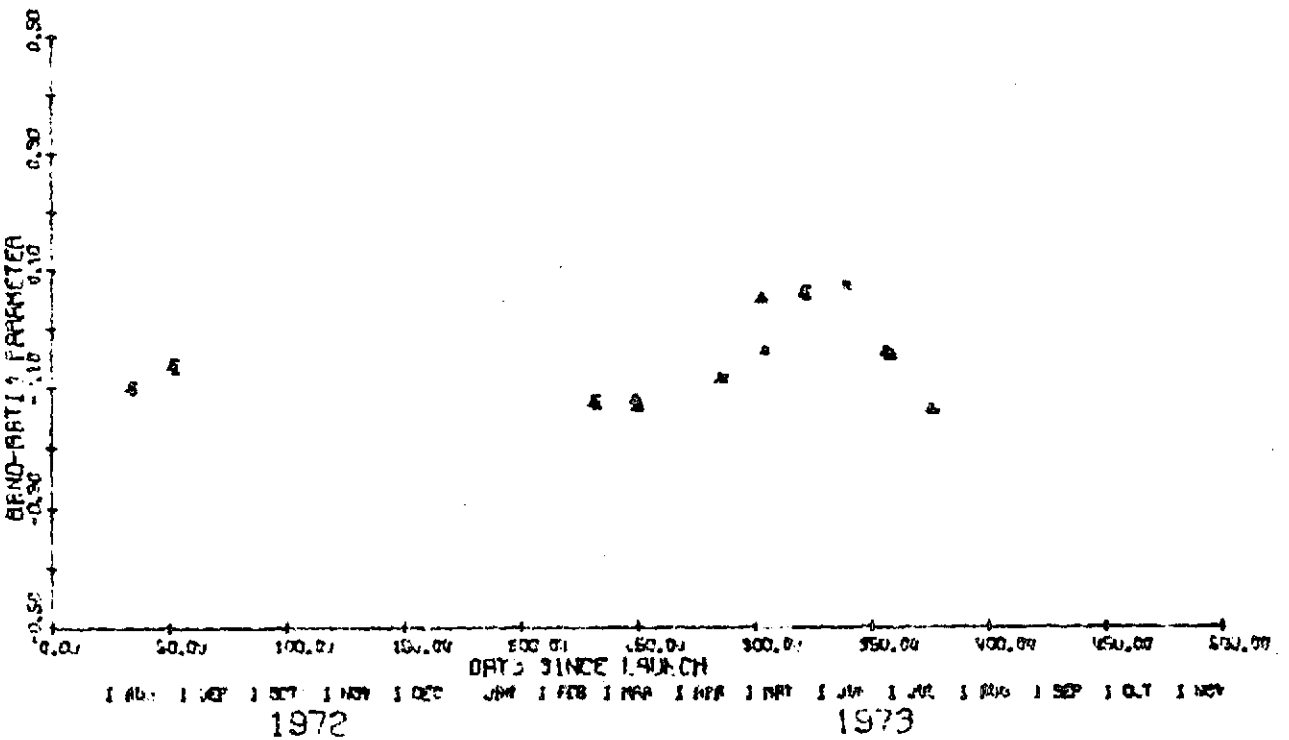
ERTS1
BAND-RATIO PARAMETER
HAVRE, MT.
(AREA)



ERTS1
BAND RATIO PARAMETER
HAVRE, MT.
(RANGE)



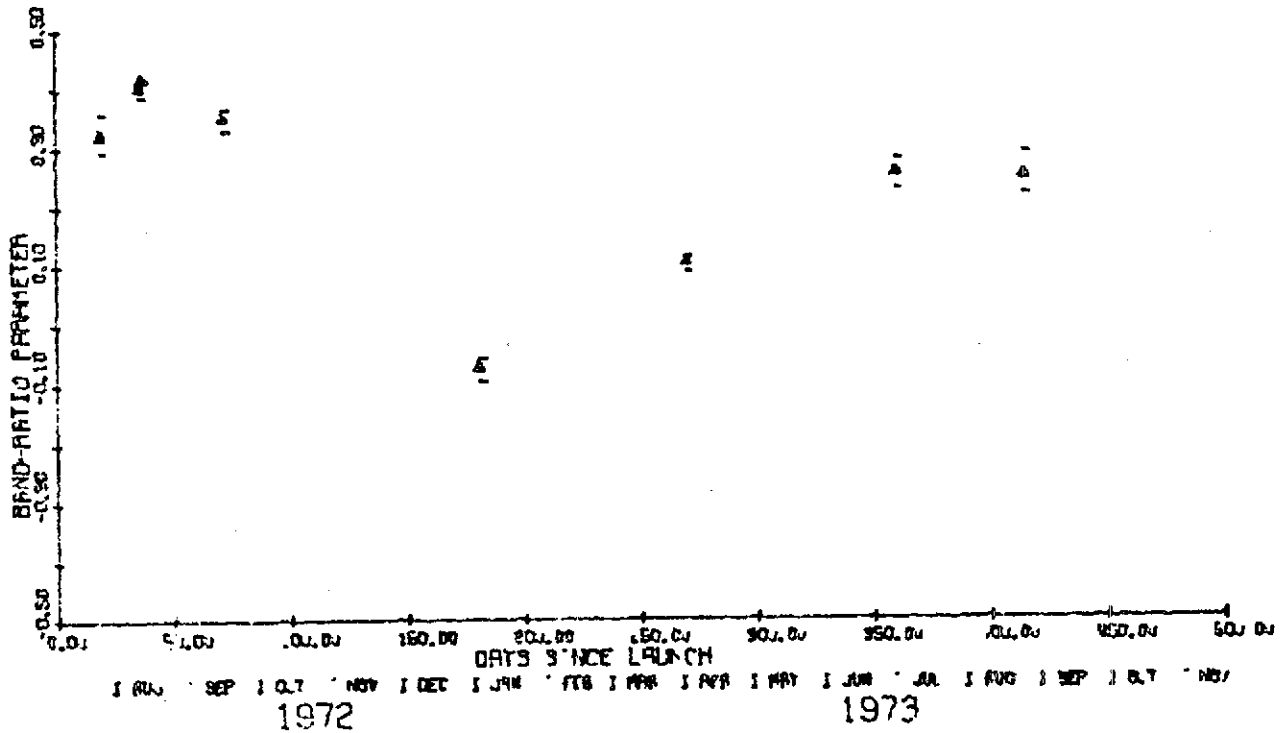
ERTS1
BAND-RATIO PARAMETER
HAVRE, MT.
(WHEAT)



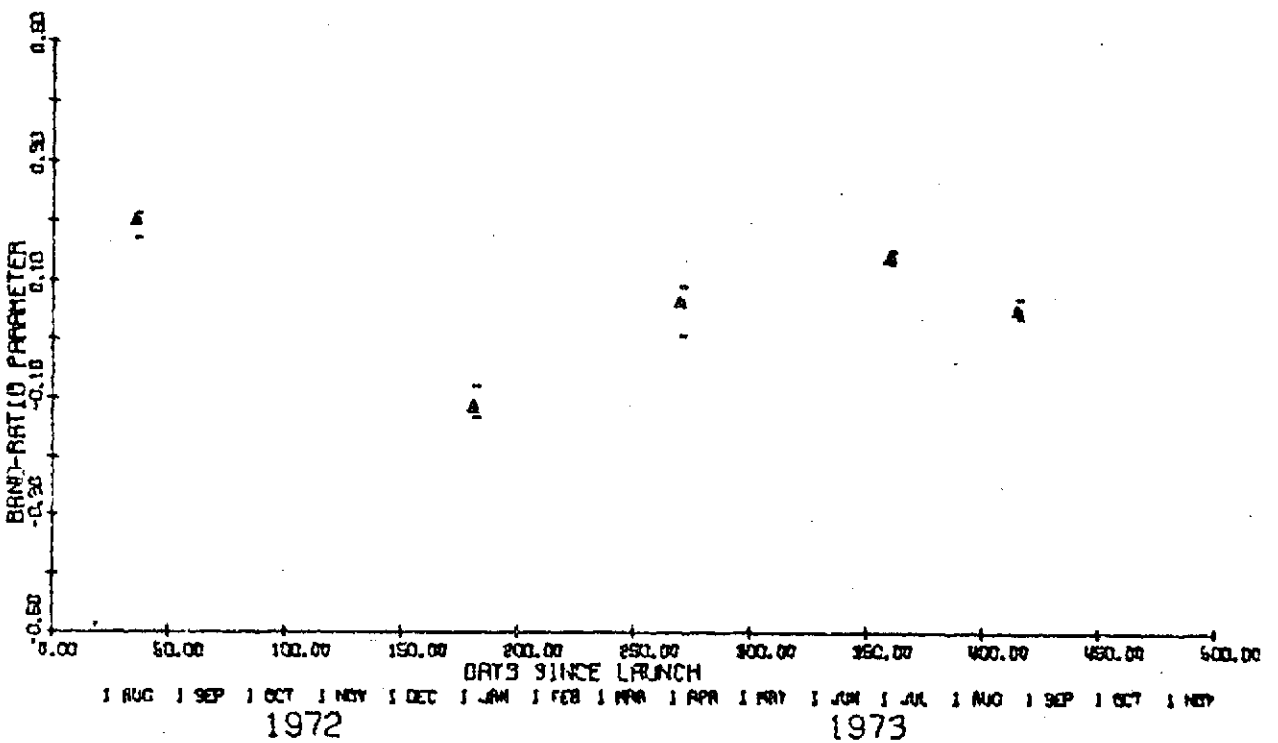
COLUMBIA VALLEY CORRIDOR

Charlo, MT
47°27'N, 114°09'W

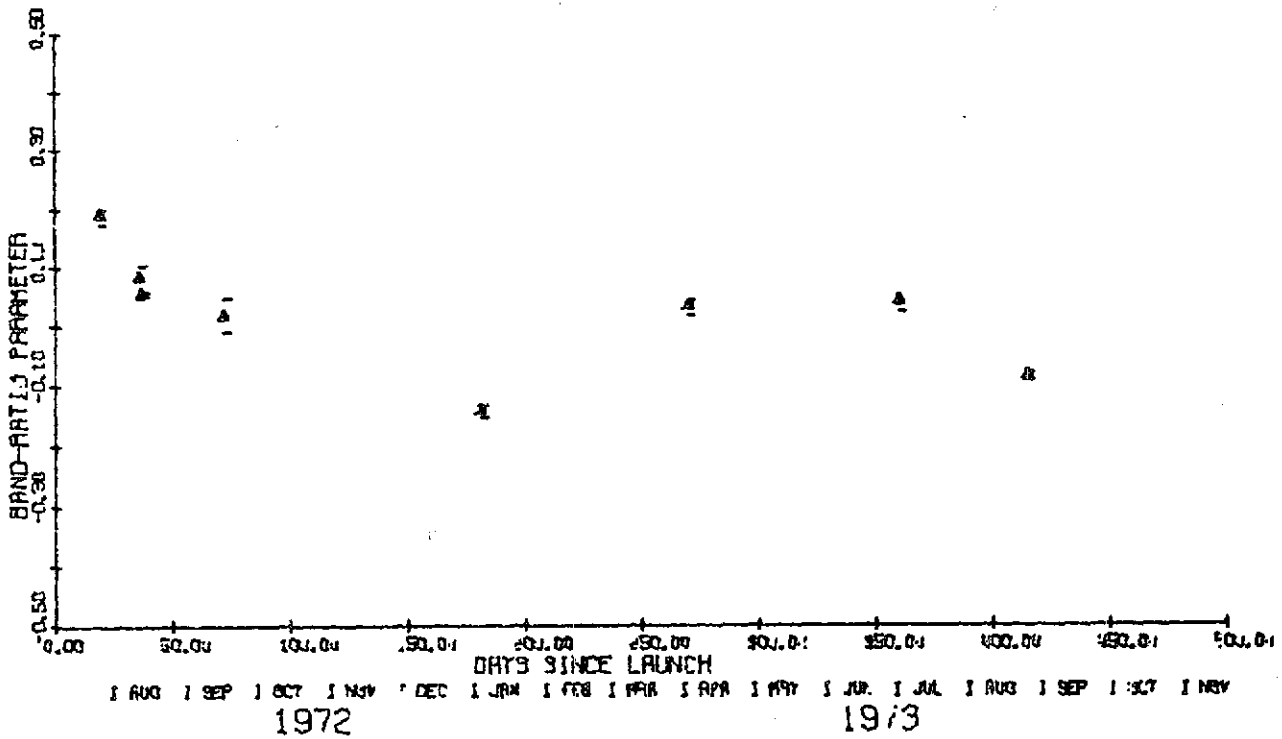
ERTS1
BAND-RATIO PARAMETER
CHARLO, MT
(ALFALFA)



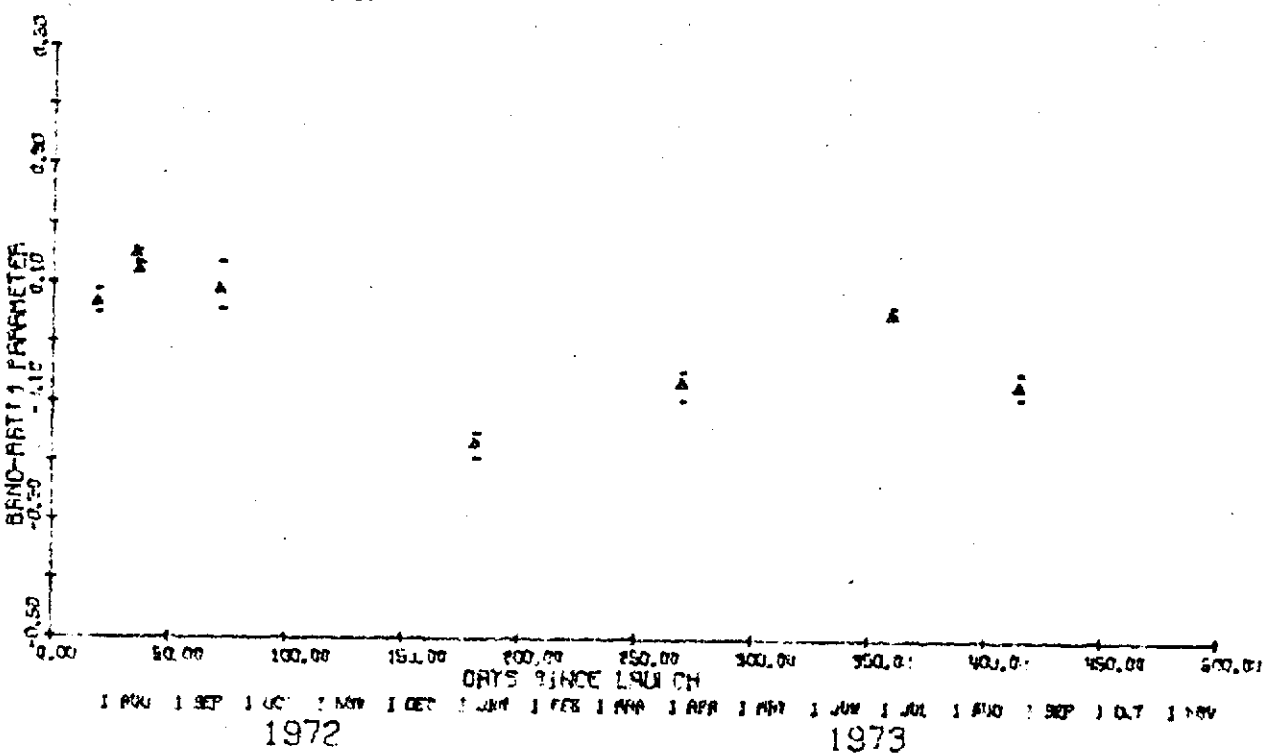
ERTS1
BAND-RATIO PARAMETER
CHARLO,MT.
(AREA)



ERTS1
BAND-RATIO PARAMETER
CHARLO, MT.
(RANGE)



ERTS1-
BAND RATIO PARAMETER
CHARLO, MT.
(WHEAT)

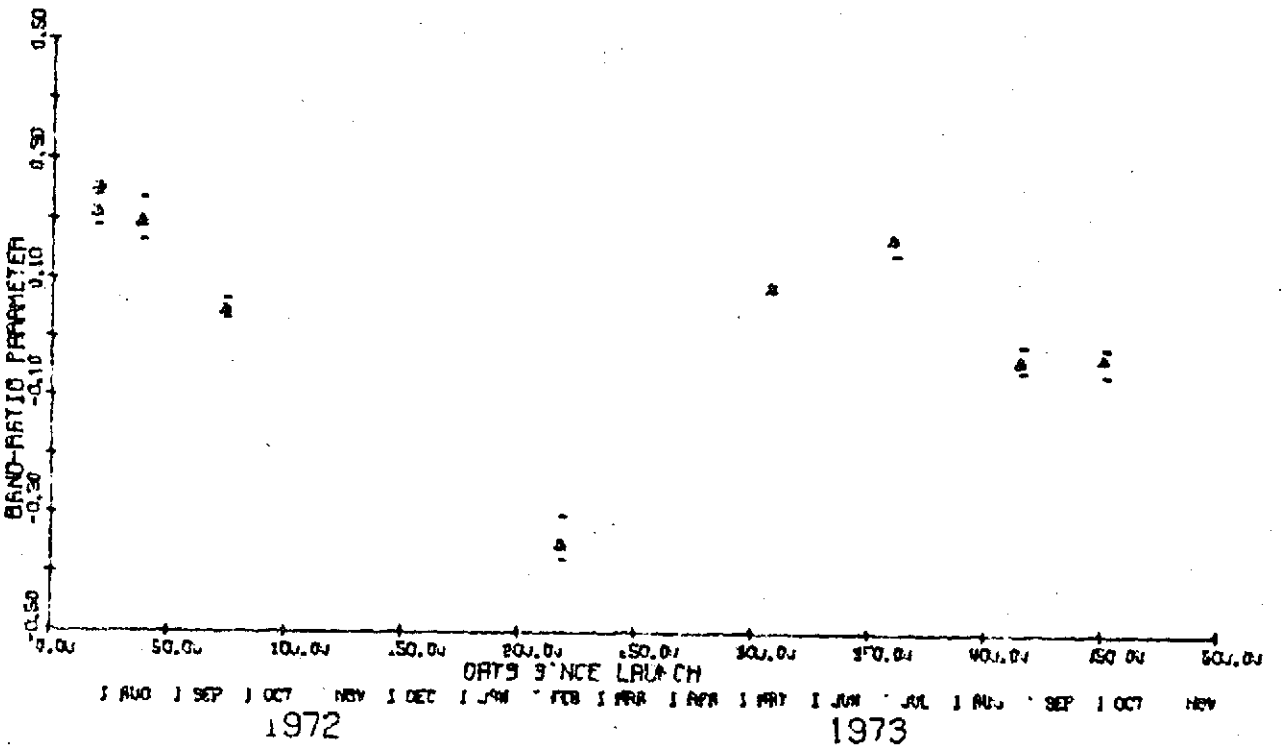


COLUMBIA VALLEY CORRIDOR

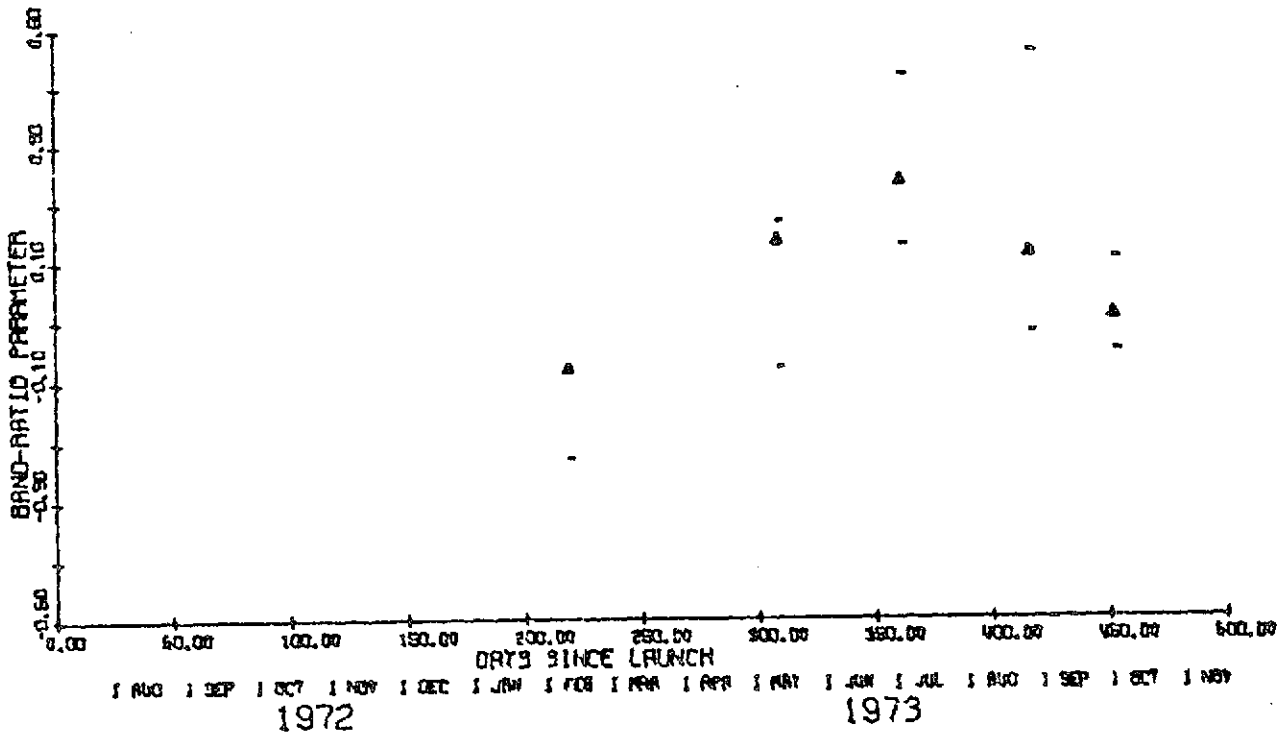
Helmer, ID

46°50'N, 116°27'W

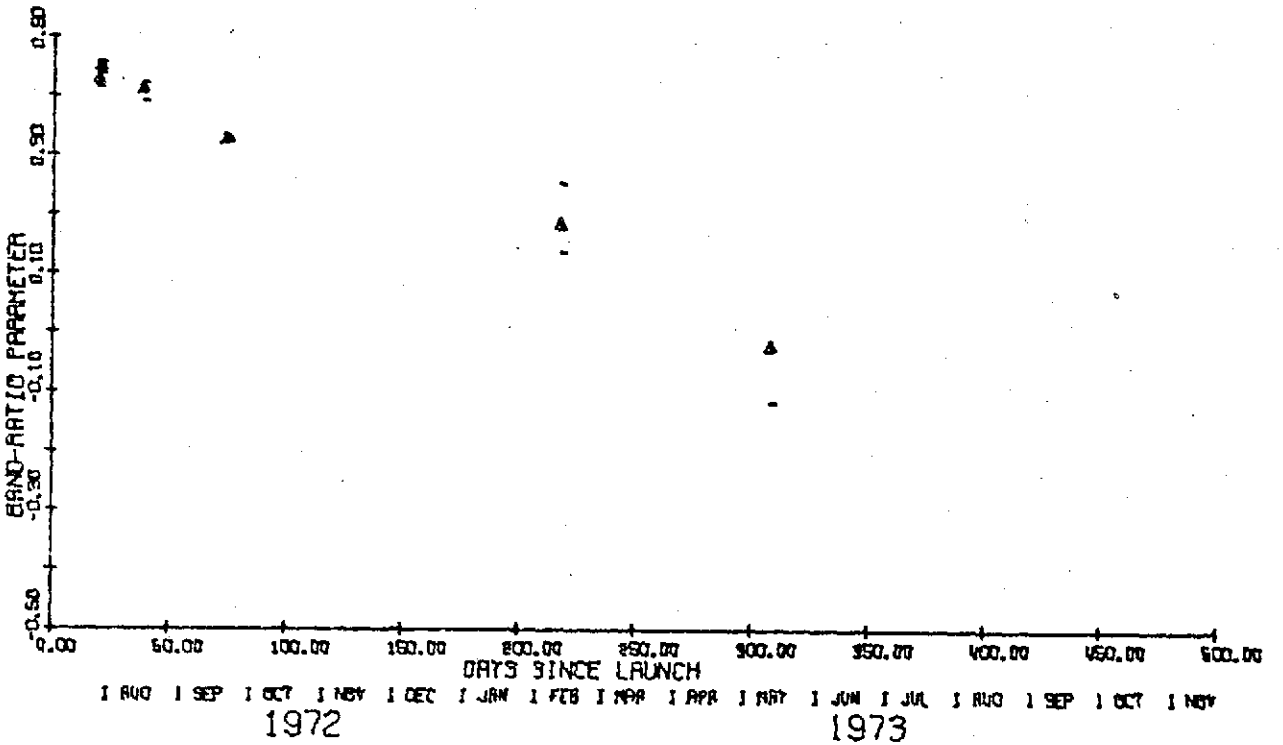
ERTS1
BAND-RATIO PARAMETER
HELMER, ID.
(ALFALFA)



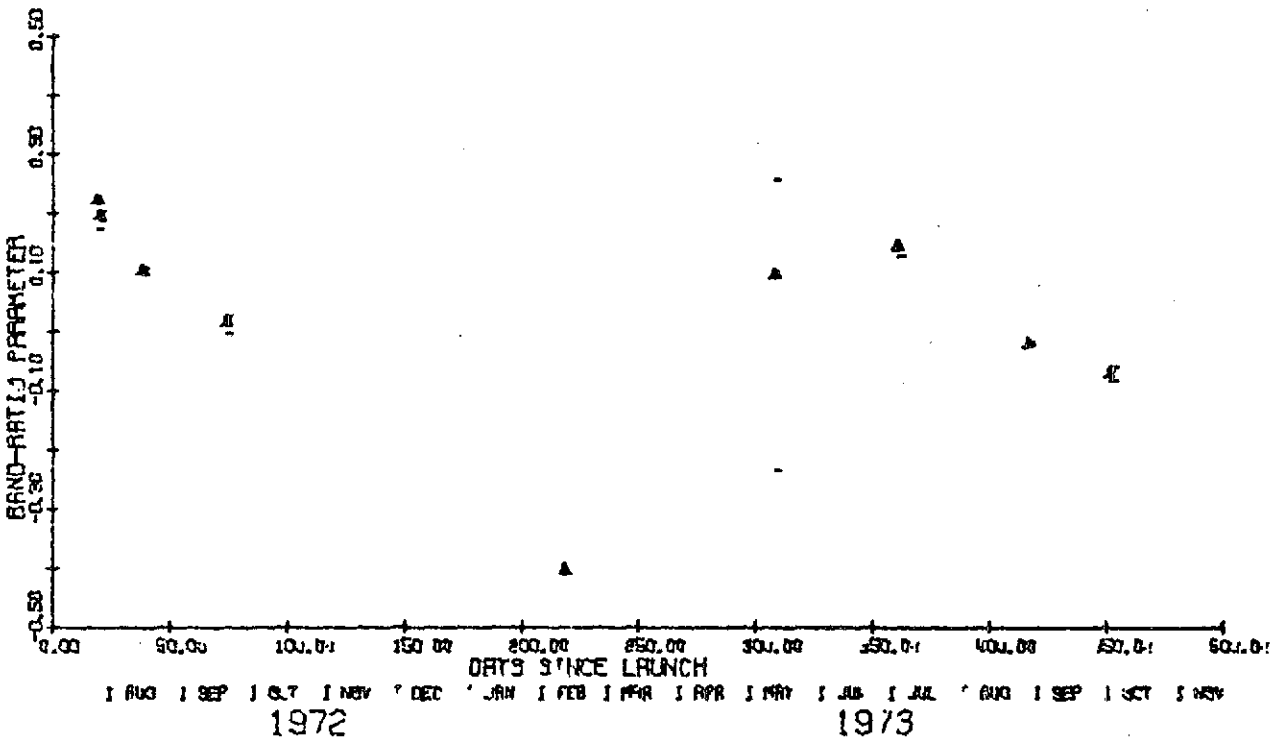
ERTS1
BAND-RATIO PARAMETER
HELMER, ID.
(AREA)



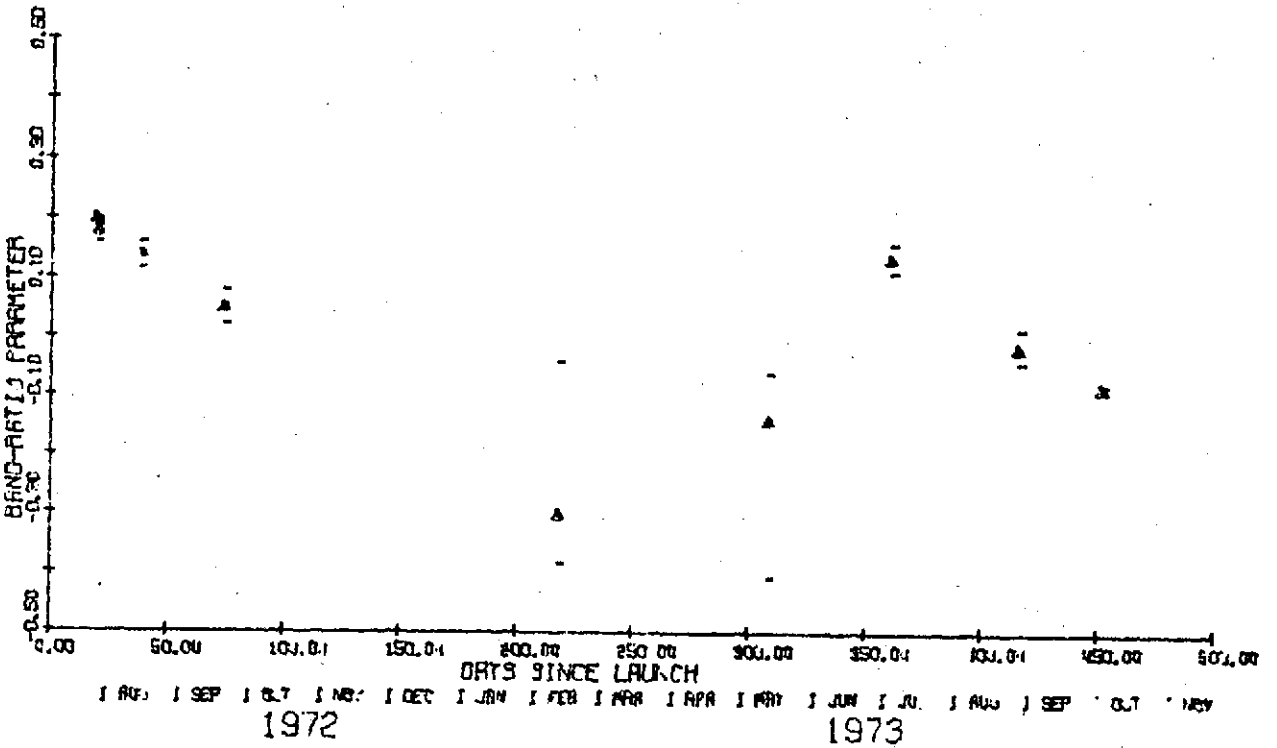
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BAND-RATIO PARAMETER
HELMER, ID.
(CONIFERS)



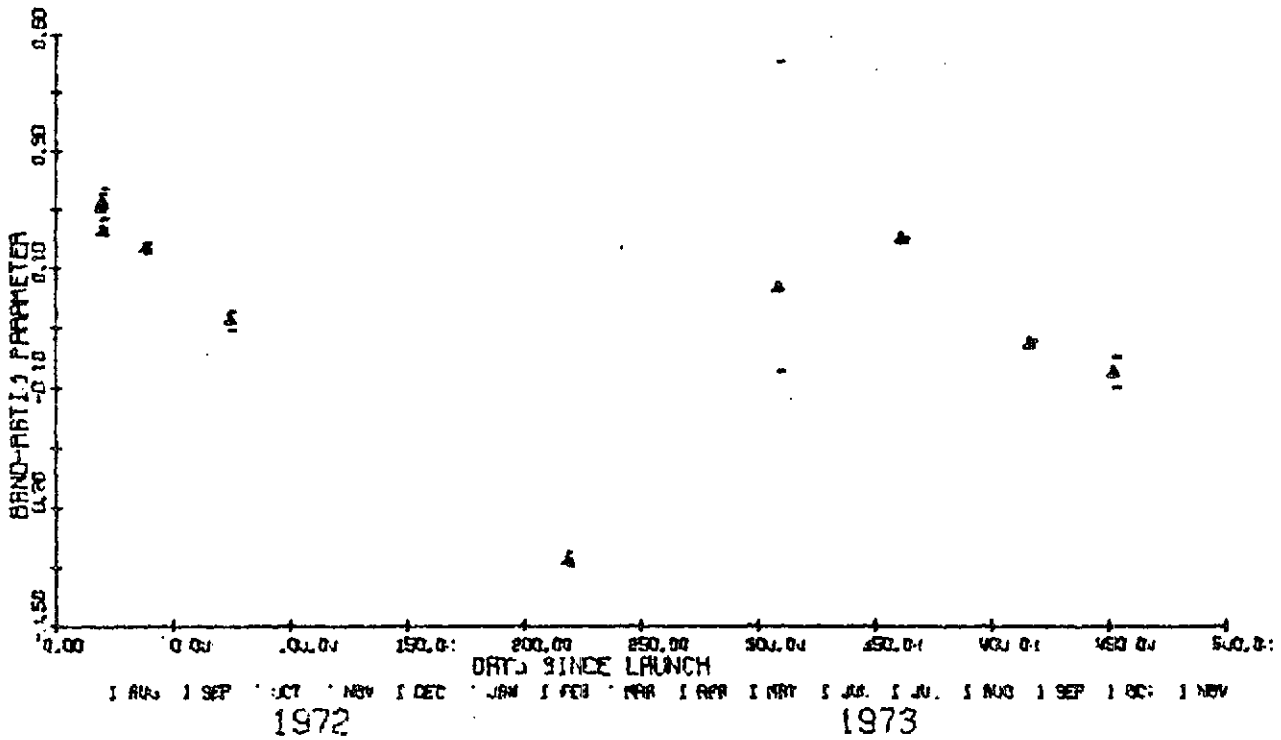
ERTS1
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HELMER, ID.
(RANGE 1)



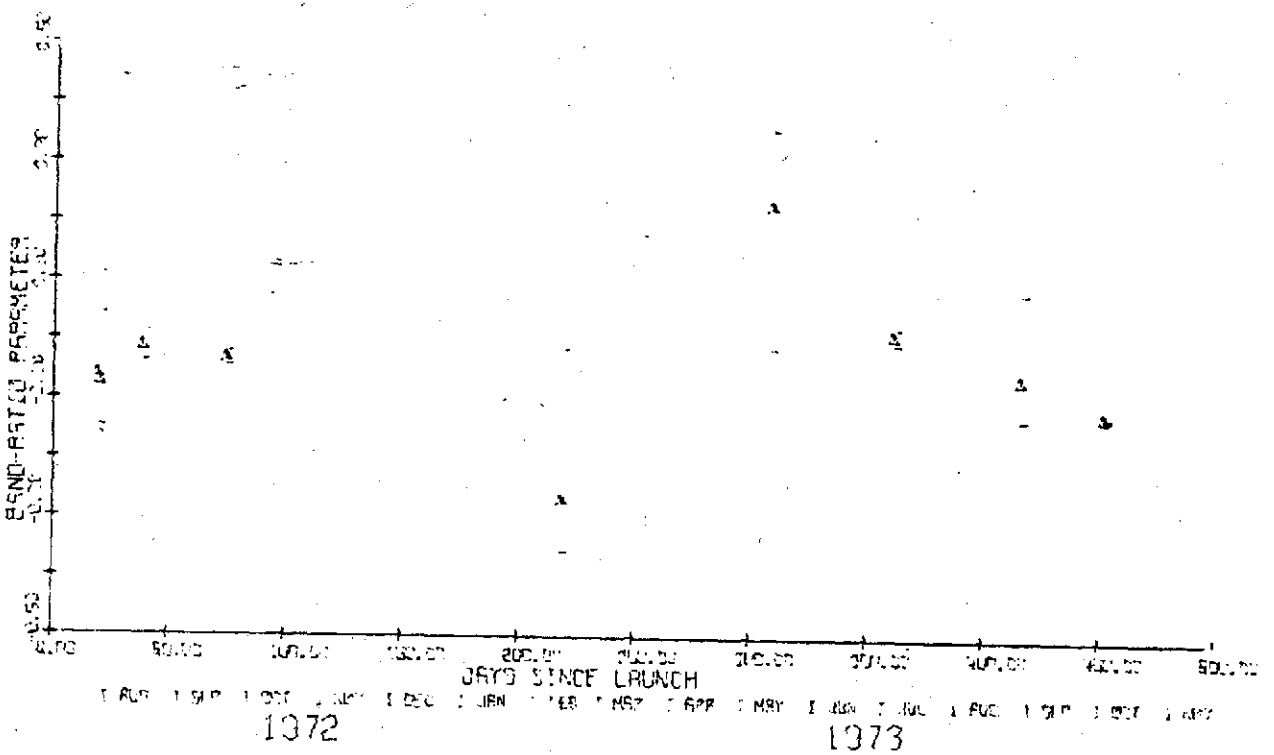
ERTS1
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HELMER, ID.
(RANGE 2)



ERTS1
BAND RATIO PARAMETER
HELMER, ID.
(RANGE 3)



LANDSAT
BAND-RATIO PARAMETER
HELMER, CO.
(WHEAT)



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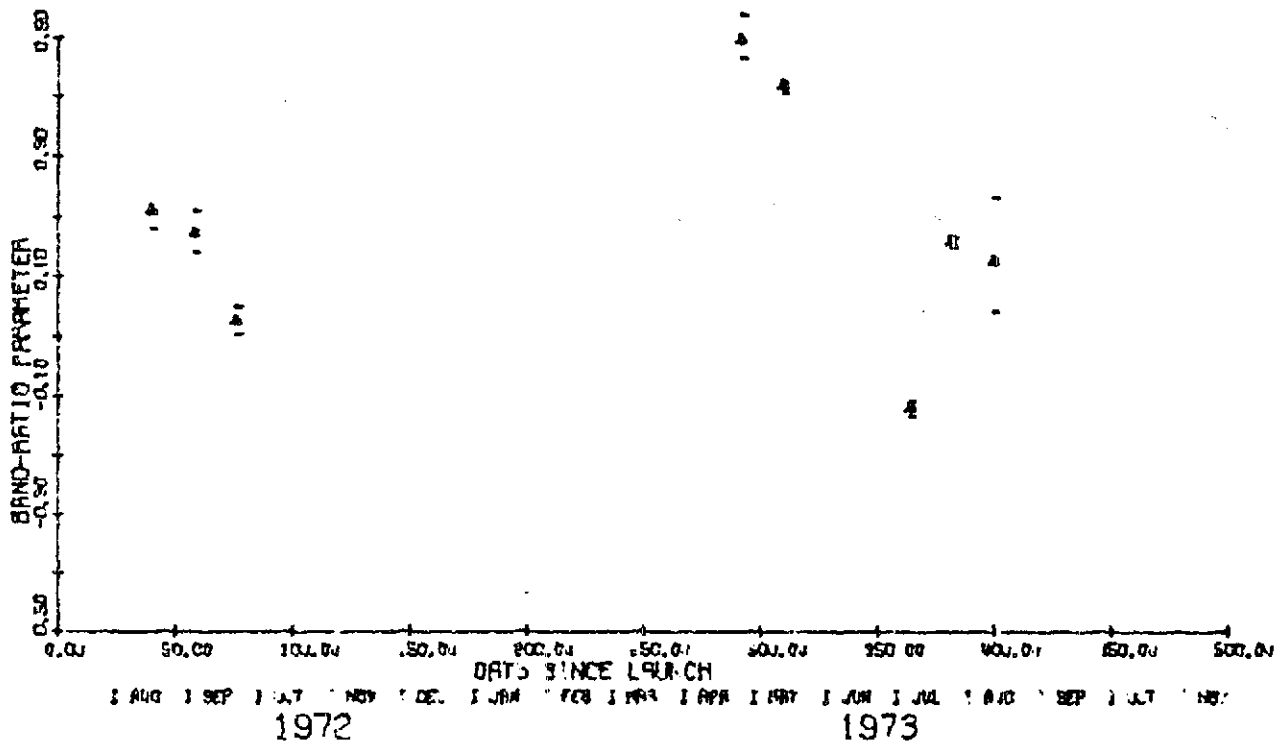
COLUMBIA VALLEY CORRIDOR

Bickleton, WA
46°03'N, 120°13'W

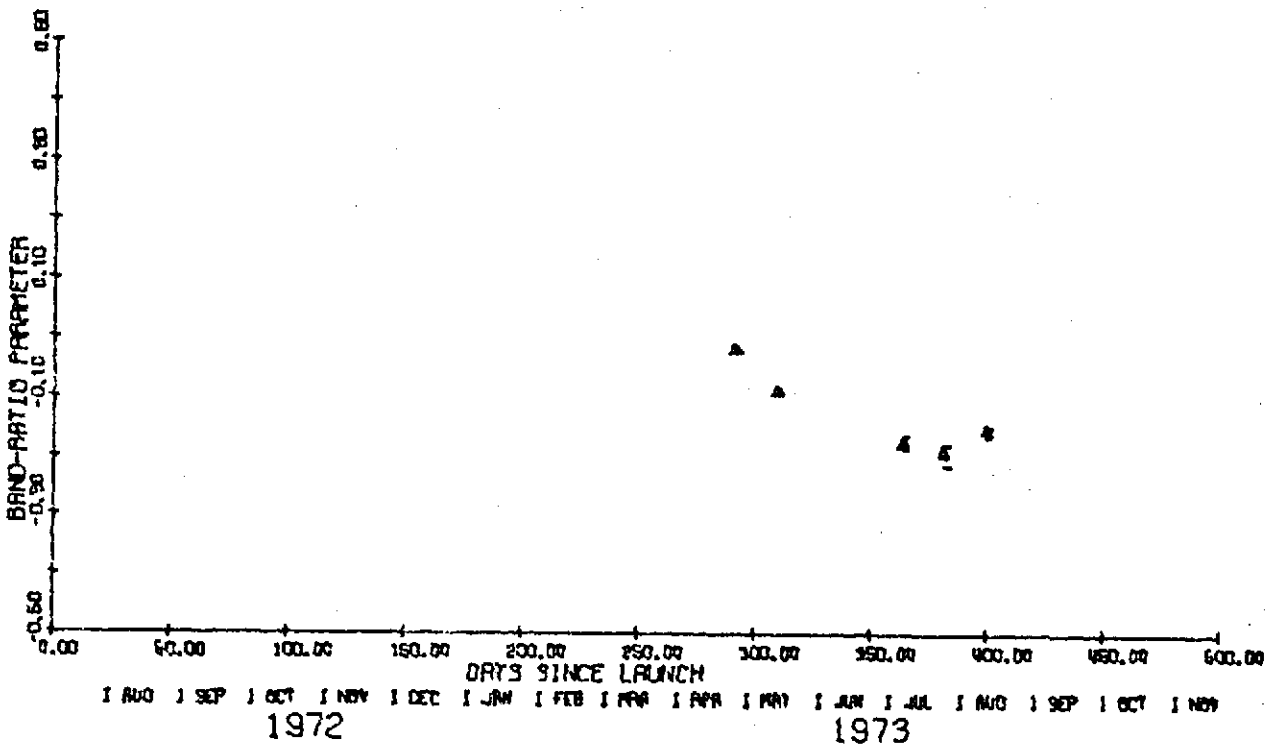


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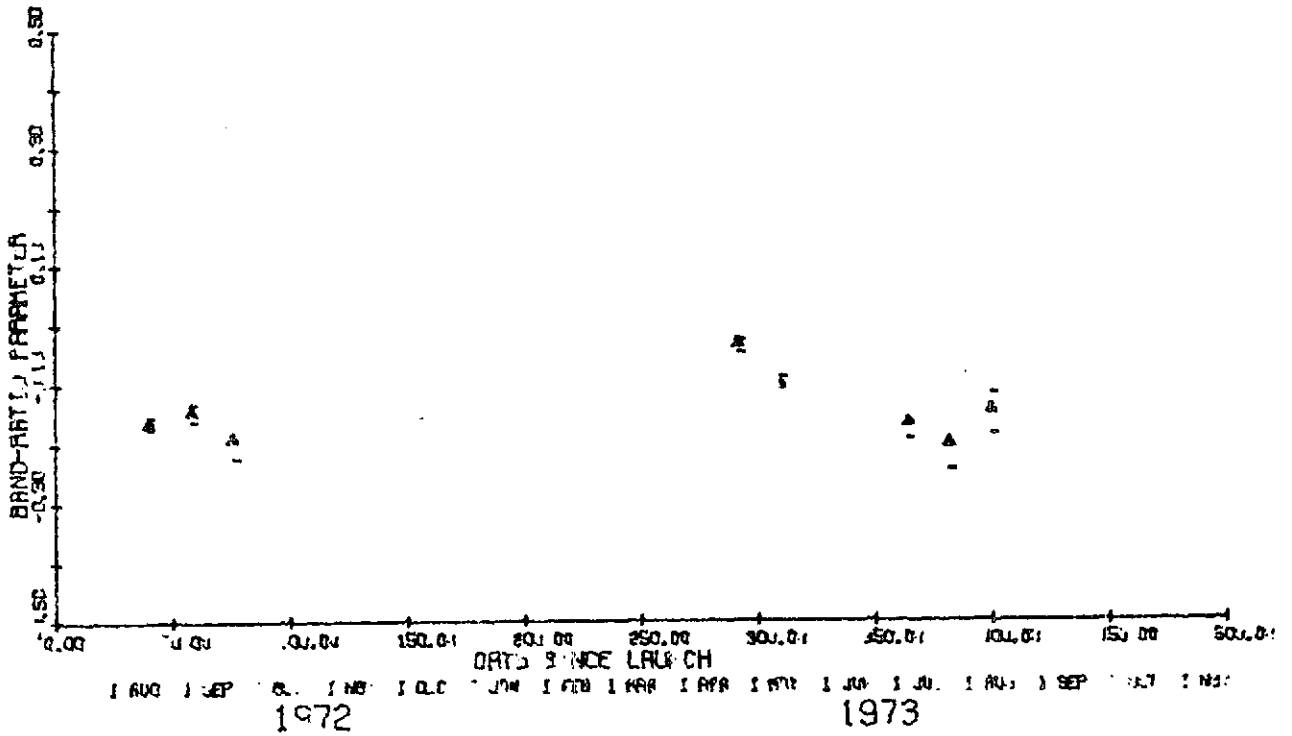
ERTS1
BAND-RATIO PARAMETER
BICKLETON, WA
(ALFALFA)



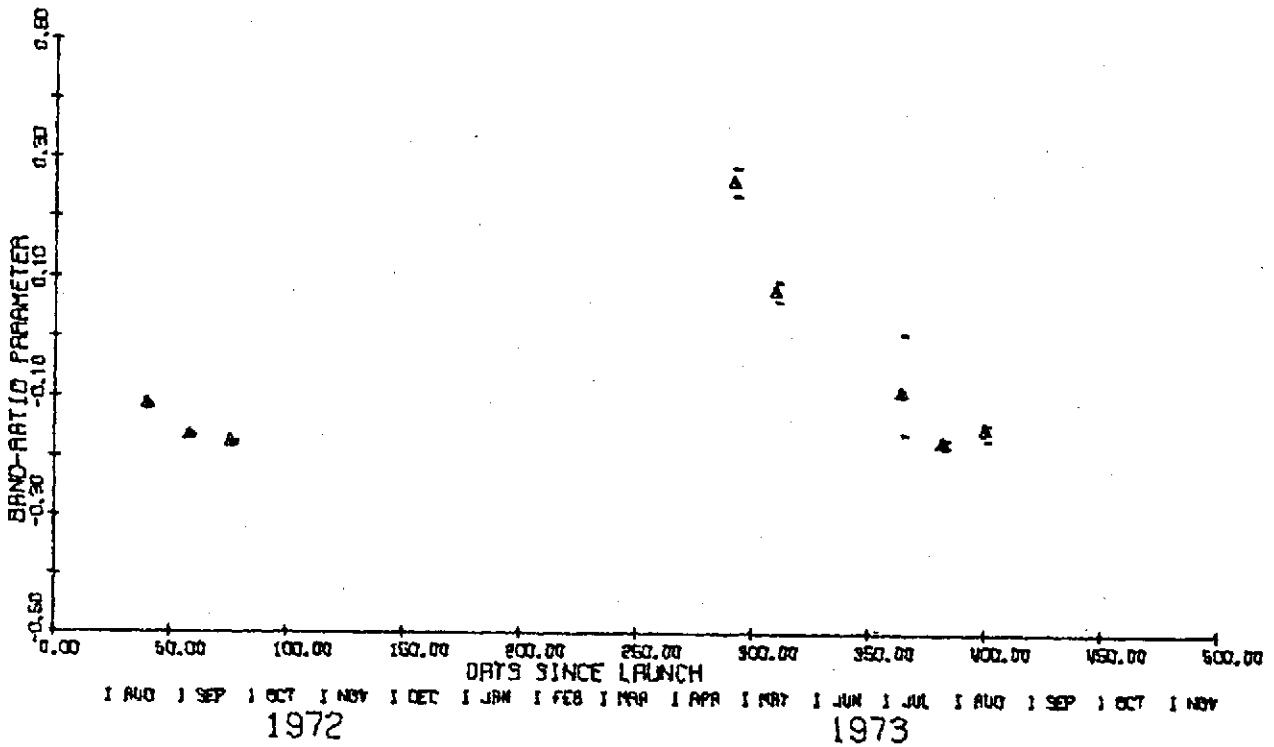
ERTS1
BAND-RATIO PARAMETER
BICKLETON, WA.
(AREA)



ERTS1
BAND-RATIO PARAMETER
BICKLETON, WA.
(RANGE)



ERTS1
BAND-RATIO PARAMETER
BICKLETON, WA.
(WHEAT)



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# APPENDIX K

# RADIATION AND ATMOSPHERIC CORRECTIONS



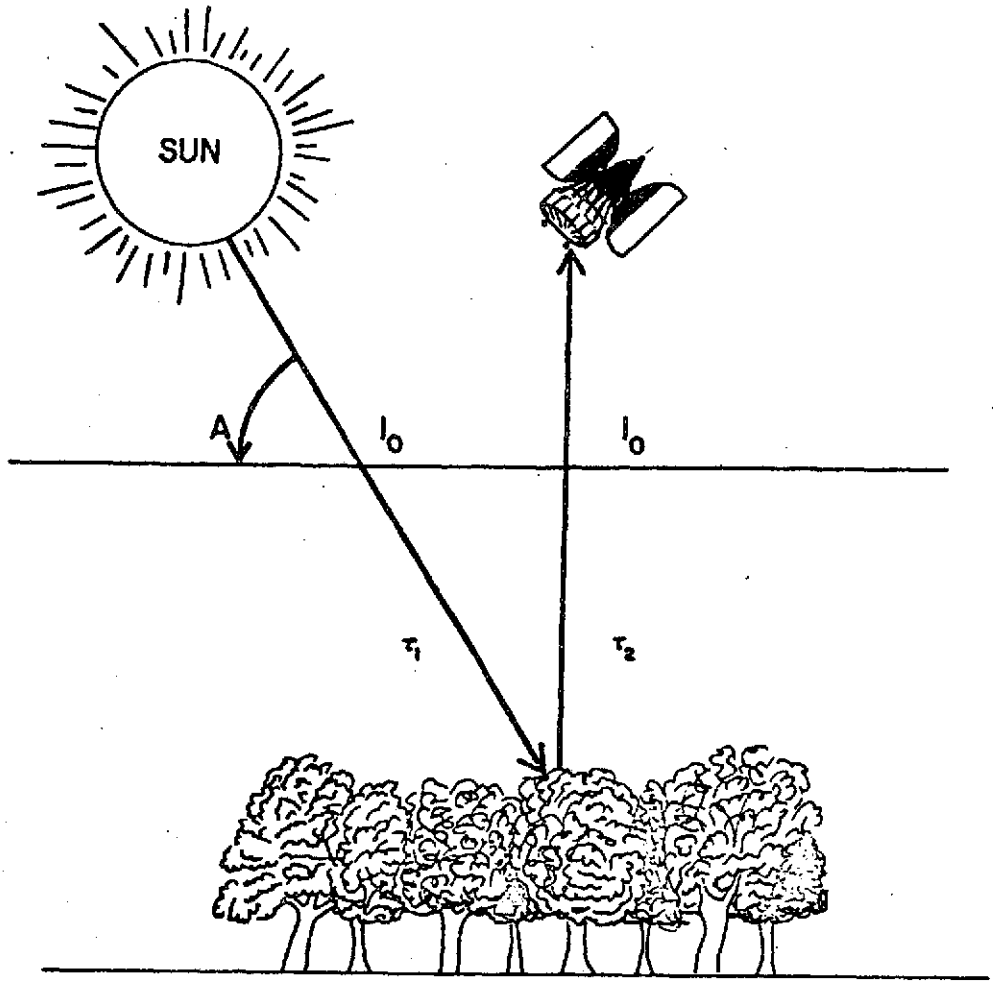
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## RADIATION AND ATMOSPHERIC CONVECTIONS

At LARS a simple geometrical model utilizing satellite and ground radiation data has been developed. The model permits the comparison of the albedo of a canopy at two different points in time. Using the peak values of spectral response sensed by the satellite, these data were corrected for the aforementioned factors using the solar elevation at the time of overpass as listed on the ERTS imagery frames as well as the direct beam solar radiation received at the earth's surface from the weather station nearest the test site.

Figure 1 illustrates a monochromatic direct beam of radiation, $I_o$, striking a plane at the top of the atmosphere which is parallel to the terrain immediately below. $I_o$ is given by equation (1) (page 768), Z being the zenith angle of the sun (90°-A) and $S_o$ being the solar constant for a particular monochromatic beam. Beer's Law allows the calculation of the surface, $I_c$. This is shown by equation (2).

Equation (2) can be rewritten in the form of equation (4) by substituting for the negative exponential through equation (3). If 'a' is the canopy's albedo, equation (5) indicates the direct beam monochromatic radiation returning to the satellite (assuming the satellite is directly overhead). Equation (5) may again be rewritten in the form of equation (7) by substituting for the negative exponential through (6). The two transmissivity factors, $\tau$ and $\tau_2$ are related through (8) and (9) if the monochromatic extinction coefficients for the paths $I_o \rightarrow I_c$ and $I_c \rightarrow I_s$ are assumed equal. Thus (11) results from (7) by using (2), (4), and (9). If $\tau$ is used to represent a "combined" monochromatic atmospheric transmissivity (12) factor (11) is simplified to (13).




A = Solar Elevation Angle

Z = 90°-A Zenith Angle of Sun

$I_o$= $S_o$ cos Z

$S_o$= Solar Constant

$I_c$= Intensity at Canopy Top

$I_s$= Monochromatic Intensity Measured by Satellite

$\tau_1$= Transmissivity for $I_o$-$I_c$ Path

$\tau_2$= Transmissivity for $I_c$-$I_s$ Path

a = Albedo Canopy

Figure 1. Factors Affecting Satellite Sensed Data.

Equation (13) can be considered for two different months, i and j, and with the appropriate superscripting (14a) and (14b) result. Taking the ratio of (14a) to (14b) results in (15) and this may be solved in turn for $\frac{a^i}{a^j}$, which is (16). Equation (16) shows that the ratio of the albedos of a canopy at two different times is given by the product of A·B·C where:

$$A = \frac{I_s^i}{I_s^j} \quad \rightarrow \quad \text{ratio of direct beam intensities at satellite at times i and j}$$

$$B = \frac{\gamma^j}{\gamma^i} \quad \rightarrow \quad \text{ratio of "combined" transmissivity at times j and i}$$

$$C = \frac{\cos^j Z}{\cos^i Z} \quad \rightarrow \quad \text{ratio of cosines of zenith angle at times j and i}$$

A and C can be obtained from the ERTS data, but what about the combined transmissivity term B? The transmissivity $\tau_l$ can also be expressed as the ratio of the actual monochromatic direct beam intensity striking the surface, $I_c$, and the monochromatic intensity that would strike the surface in the absence of an atmosphere, $I_o$. This is expected in (17). Using (17), (12) may be rewritten for times i and j to obtain (18a) and (18b). The ratio of (18a) and (18b) results in (19), and (19) substituted into (16) results in the final equation (20).

$$\frac{a^i}{a^j} = \left(\frac{I_s^i}{I_s^j}\right)\left(\frac{I_c^j}{I_c^i}\right)\left[\frac{\left(\frac{I_c^j}{I_o}\right)\cos^j Z}{\left(\frac{I_c^i}{I_o}\right)\cos^i Z}\right]$$

This equation permits a direct comparison of the albedo of a canopy at two different times. Since it is a ratio comparison, $I_s$ and $I_c$ need not have the same units.

Caution must be exercised in the application of equation (20) due to its monochromatic nature. For example, when the solar constant is used in the equation, it does not have the value of 2 ly $min^{-1}$ but rather the sum of the direct beam energy in the waveband interval being considered.

| | | | | ly $min^{-1}$ |
|---|---|---|---|---|
| Band 4 | .5 - .6μ | $S_{o1}$ | → | .277 |
| Band 5 | .6 - .7μ | $S_{o2}$ | → | .236 |
| Band 6 | .7 - .8μ | $S_{o3}$ | → | .193 |
| Band 7 | .8 - 1.1μ | $S_{o4}$ | → | .370 |

Figure 2 illustrates the results of corrections applied to some ERTS data for Lafayette, Indiana for three different ratio comparisons. The ratio of the data $I_s^i / I_s^j$, the ratio after correcting with direct beam radiation measured at the surface, and the ratio after correcting using total solar radiation (not strictly justified since total solar measurements are flux measurements) are all protrayed for the four ERTS bands. The following conclusions can be drawn:

a. The longer the time between observations, the more important the correction factor becomes.

b. In the visible bands, 4 and 5, where the initial analysis showed no systematic change, the corrected values indicate a definite increase in response as senescence occurs.

c. While there is a significant shift in the infrared bands, 6 and 7, after applying corrections, they are not sufficient to reverse the direction of the

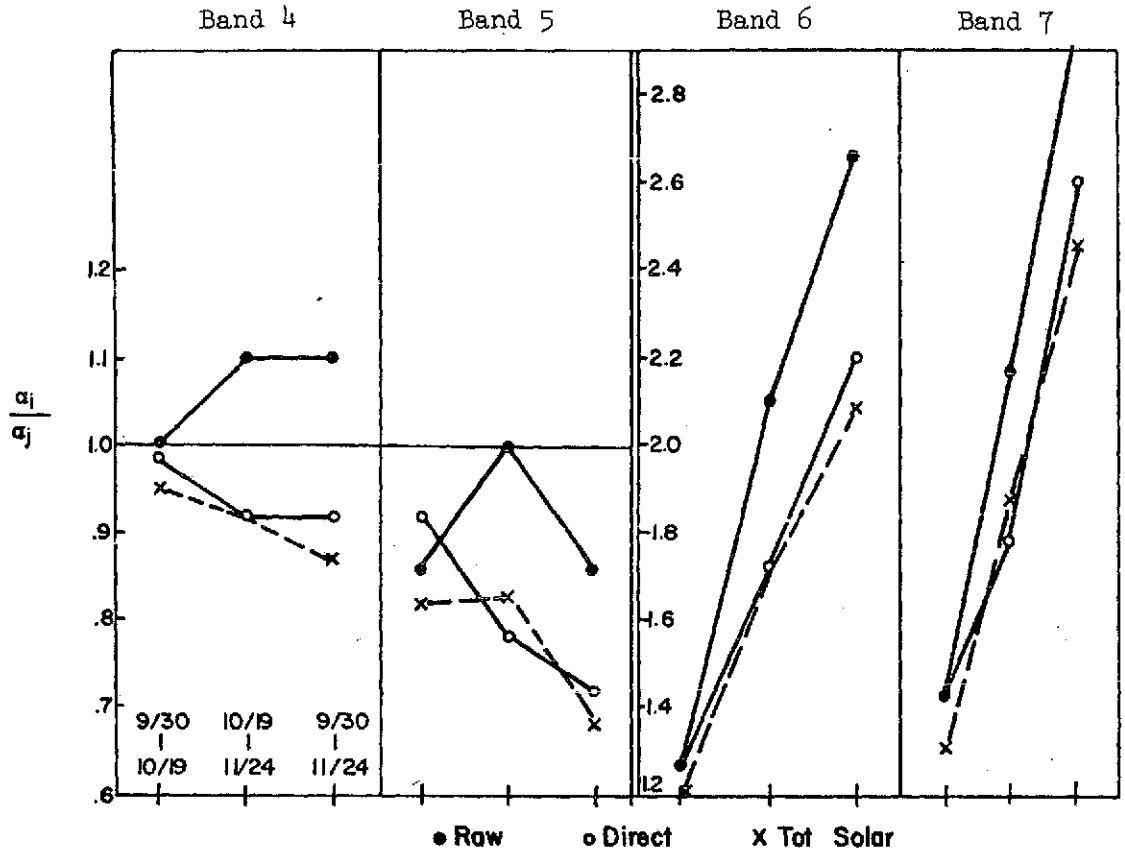



Figure 2. Ratio Graphs of Applied Correction Factors Compared to Uncorrected Data for Lafayette, Indiana.

• equals Raw Data Ratios
o equals Direct Data Ratios
X equals Total Solar Data Ratios

change in response. The near infrared still shows a decrease in reflectance as the Brown Wave progresses.

d. Similar results are obtained whether direct or total solar radiation is used in equation (20).

These results are consistent with what would be expected during vegetative maturation--an increase in response in the visual bands while the infrared shows a decrease. They show that band 6 and 7 are still meaningful for analysis thus far in their unaltered form. When bands 4 and 5 are corrected for outside factors influencing the plant's satellite sensed response, the pattern of changes in spectral properties is enhanced.

At RSC, Texas A & M University, a data analysis project was undertaken to determine the amount of variation introduced as a result of changes in atmospheric and illumination conditions. This project also investigated methods and models which would be useful in reducing these effects upon the results of the phenology study.

Analyses were conducted to gain experience with the satellite data to correlate with observed albedo changes. Initial studies were conducted by examination of between-band probability density functions of the sensor data values from multitemporal and multiple site sources. A scene (32 km x 32 km) was selected for the College Station area for three dates in 1972 (30 August, October 23, and December 16). Two-dimensional frequency counts were made of two-band data value pairs for each date. A frequency threshold was selected (700 points) and all data pairs having a higher rate than this threshold were plotted on a two-dimensional cluster plot (Fig. 3). In examining the aggregate of superimposed clusters from multiple dates, two characteristics are noted. Changes in scene characteristic signatures apparent in the shape of the clusters are noted, especially between the October and the December data. This relationship between the August and

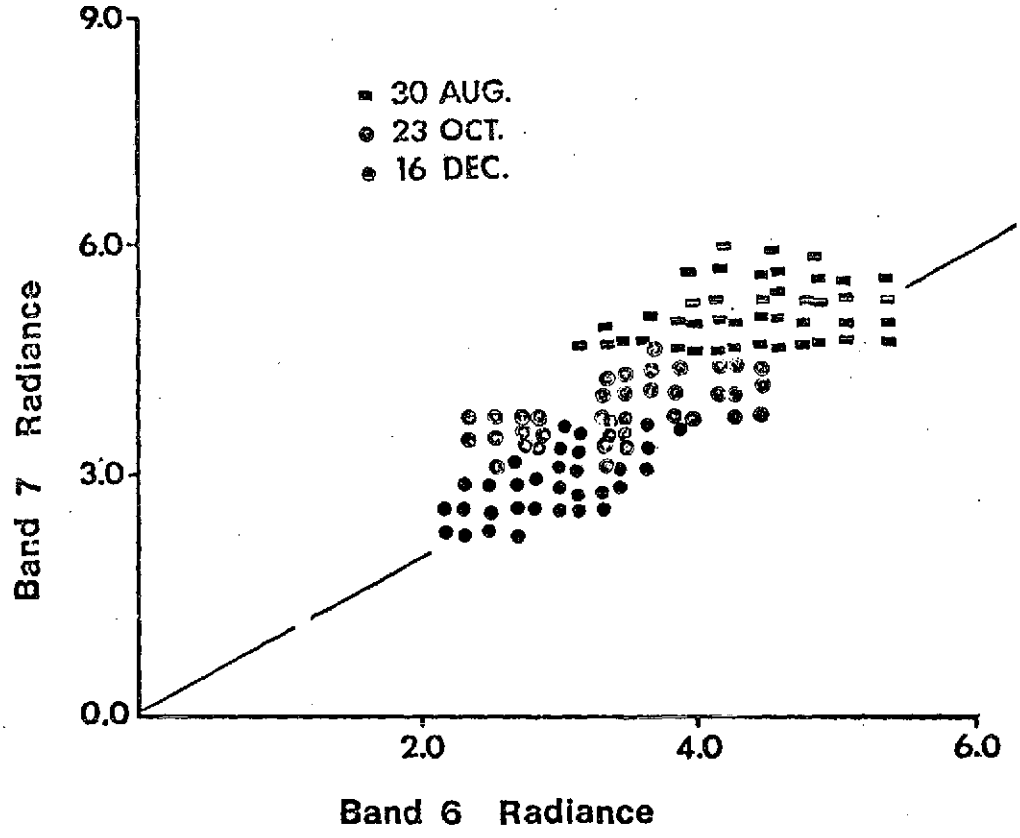
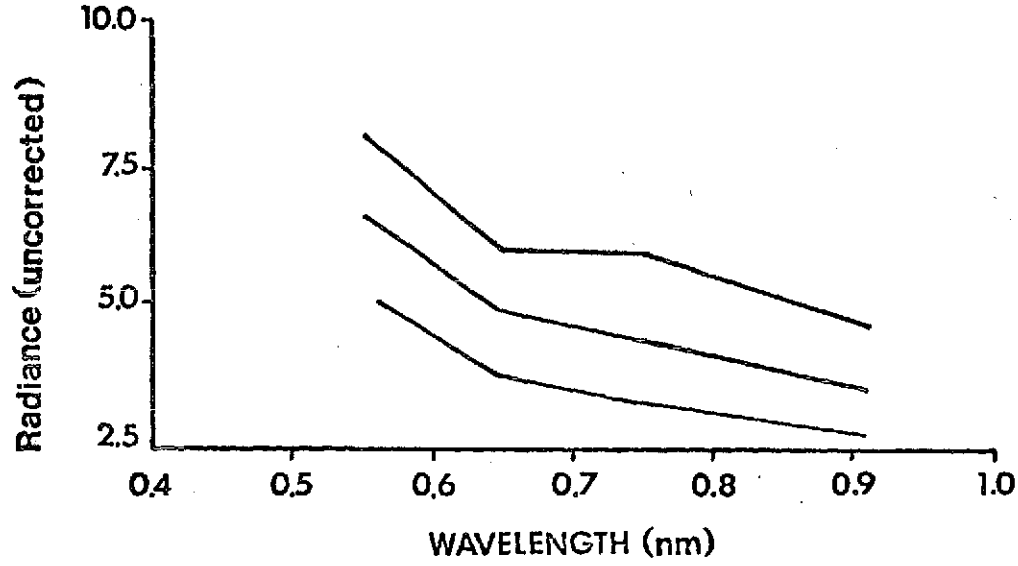



Figure 3. Two-dimensional cluster plot for Bands 6 and 7 radiance, College Station, Texas.

October data sets is relatively consistent at the lewel of significance of the display. However, the dominant trend apparent in the data is a general decrease in scene data values over time. This result immediately suggests scene illumination variations (as might be expected), and emphasizes the magnitude of their effect, which dominates the data relationships.

Sun angle corrections were implemented using a simple mathematical relationship of the intensity of solar radiation, $I_H$, falling upon a horizontal plane as a function of the solar constant $I_o$, and the solar elevation $\gamma$. This relationship ($I_H = I_o \sin\gamma$) was used to apply corrections to satellite data for variations due to the changes in source illumination intensity as a function of solar elevation angles. These illumination corrections appear to be reasonably successful in removing bias from the data sets apparent as a function of time.

In parallel with these solar illumination studies, an activity was initiated to obtain multitemporal, spectral signatures from terrain areas generally expected to vary the least, such as urban areas and cultural features. A test site from the non-industrial, downtown area of Bryan, Texas was selected for initial study. Multitemporal spectral signatures were computed for the three dates which were available. In Figure 4 is shown the relationship between these signatures. The temporal variation is readily apparent. Applying the sun angle corrections described above, the data fall into alignment. In fact, the sun angle correction puts all of the signatures within one sample standard deviation. It appears that vegetative scene inhomogenieties are the major contributor to data variance, and that variance produced as a result of atmospheric variation in non-industrial regions from some nominal value is small in comparison. Direct application of ERTS data to the problems addressed in this study is not dependent upon precise atmospheric correction, and it appears from the



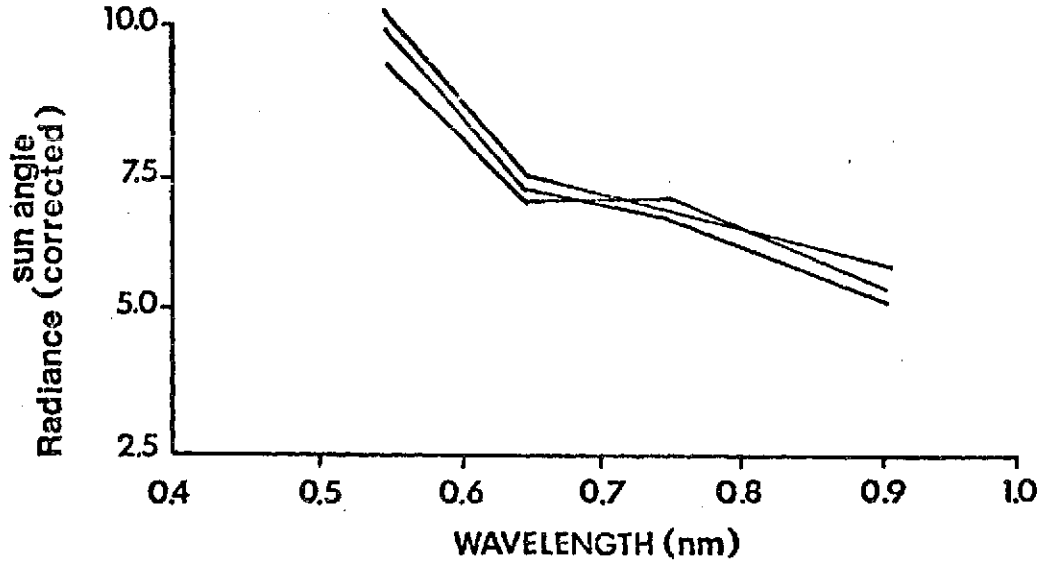




Figure 4. Multitemporal spectral signatures, Bryan, Texas.

data considered that sun angle correction provides adequate reduction of multitemporal data variance.

Corrections to ERTS data for the Eastern Corridors were found to be helpful due to variations of water vapor and particulate matter in the atmosphere. Unfortunately, the necessary radiation information was seldom available and, therefore, no correction factors could be applied to the data. In the clearer atmosphere over the Western Corridors, correction for sun angle change was the only correction necessary.

All equations refer to monochromatic intensities.

$$I_o = S_o \cos Z \tag{1}$$

$$I_c = I_o \exp(-k\, u \sec Z) \tag{2}$$

Let: $$\tau_1 = \exp(-k\, u \sec Z) \tag{3}$$

Then: $$I_c = I_o\, \tau_1 \tag{4}$$

$$I_s = a\, I_c \exp(-k\, u) \tag{5}$$

Let: $$\tau_2 = \exp(-k\, u) \tag{6}$$

Then: $$I_s = a\, I_c\, \tau_2 \tag{7}$$

Also: $$\tau_1 = (\tau_2)(\sec Z) \tag{8}$$

or $$\tau_2 = (\tau_1)(\cos Z) \tag{9}$$

$$I_s = a\, S_o(\cos Z)\tau_1\, \tau_2 \tag{10}$$

or $$I_s = a\, S_o\, (\cos Z)\tau_1\, (\tau_1)(\cos Z) \tag{11}$$

Let: $$\gamma = \tau_1\, (\tau_1)(\cos Z) \tag{12}$$

Then: $$I_s = a\, \gamma\, S_o(\cos Z) \tag{13}$$

For two different months, i and j, we can write:

$$I_s^i = a^i \gamma^i \cos^i Z \tag{14a}$$

$$I_s^j = a^j \gamma^j \cos^j Z \tag{14b}$$

Therefore: $$\frac{I_s^i}{I_s^j} = \frac{a^i \gamma^i \cos^i Z}{a^j \gamma^j \cos^j Z} \tag{15}$$

or $$\frac{a^i}{a^j} = \underbrace{\left(\frac{I_s^i}{I_s^j}\right)}_{A} \underbrace{\left(\frac{\gamma^j}{\gamma^i}\right)}_{B} \underbrace{\left(\frac{\cos^j Z}{\cos^i Z}\right)}_{C} \tag{16}$$

Where: A - raw data, B - transmissivity correction, C - elevation angle correction.

A and C can be obtained directly from ERTS data but B must be obtained in the following manner:

$$\tau_1 = \frac{I_c}{I_o} \tag{17}$$

Therefore: $$\gamma^i = \left(\frac{I_c^i}{I_o^i}\right)\left(\frac{I_c^i}{I_o^i}\right)\cos^i Z \tag{18a}$$

$$\gamma^j = \left(\frac{I_c^j}{I_o^j}\right)\left(\frac{I_c^j}{I_o^j}\right)\cos^j Z \tag{18b}$$

Therefore: $$\frac{\gamma^j}{\gamma^i} = \frac{\left(\frac{I_c^j}{I_o^j}\right)\left(\frac{I_c^j}{I_o^j}\right)\cos^j Z}{\left(\frac{I_c^i}{I_o^i}\right)\left(\frac{I_c^i}{I_o^i}\right)\cos^i Z} \tag{19}$$

Finally: $$\frac{a^i}{a^j} = \left(\frac{I_s^i}{I_s^j}\right)\left(\frac{I_c^j}{I_c^i}\right)\left[\frac{\left(\frac{I_c^j}{I_o^j}\right)\cos^j Z}{\left(\frac{I_c^i}{I_o^i}\right)\cos^i Z}\right]\left(\frac{I_o^i}{I_o^j}\right) \tag{20}$$

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# APPENDIX L

## GUIDELINES FOR ASSESSING VEGETATION CHANGES USING ERTS-1 SATELLITE IMAGERY



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## Introduction

The analysis and evaluation of remote sensing imagery for most purposes follows well-defined guidelines. This paper illustrates these guidelines by presenting an introduction to remote sensing principles and describing a system to assess seasonal vegetation changes using ground and Earth Resources Technology Satellite (ERTS-1) imagery. This system has been developed as part of a NASA funded project to study phenological changes over the United States. All of the interpretation, data handling and analysis procedures including darkroom methods are outlined.

## Fundamentals of Imagery Interpretation

The term imagery as discussed here refers only to ERTS-1 multispectral scanner prints and transparencies. The methods used to interpret this imagery are very similar to those used for aerial photography. The appearance or change in appearance of any object on this imagery will be a function of the imagery's resolution, scale, recorded spectral sensitivity and of the interpreter's ability-training.

Resolution is a descriptor used to indicate the fineness of detail which can be seen on the imagery. The resolution of fields, forests, and other objects is dependent upon several factors such as the feature's shape, area, contrast with surroundings and the scale of the imagery.

Scale is the number of units distance on the ground equivalent to a unit distance on the imagery. The scale of the ERTS-1, 70 millimeter format products is 1:3,369,000 or a one inch measurement on the imagery is equivalent to fifty miles distance on the ground. The 9 x 9 inch products have a scale 1:1,000,000 or approximately sixteen miles on the ground per inch on the imagery. These relatively small scales indicate that to be seen or resolved an object must be relatively large in area or contrast greatly

with its background. Experience with the ERTS-1 data indicates that crops or forests as small as ten acres in area can be identified when surrounded by crop or forest species.

## Sensor Sensitivity and Object Reflectivity

The spectral sensitivity of the remote sensors coupled with spectral reflectivity of an object are also partially determinant in whether or not or how an object will appear on the imagery. The ERTS-1 multispectral scanner has four sensors, each "looking" at a different part of the electromagnetic spectrum. These four sensitivities are expressed in terms of the wavelength response of the sensor and are 0.5-0.6 (green, band 4), 0.6-0.7 (red, band 5), 0.7-0.8 (near-infrared, band 6), 0.8-1.1 (near-infrared, band 7) micrometers. Whenever an object reflects those wavelengths to which a sensor responds, it will appear light in tone on that imagery band. Objects reflecting green wavelength radiation will appear light in tone on band 4 imagery while objects having high red reflectivity will appear light in tone on band 5 imagery. The near-infrared bands record radiation not visible to the human eye. However, the conversion of the sensor's output onto film allows objects reflecting radiation in these wavelengths to be seen as lighter tones on the resultant imagery.

Green fields and forests will often appear much lighter in tone on the infrared bands than on band 4. A much greater reflectance of near-infrared wavelengths by green vegetation in comparison with that of the green wavelengths produces this result. Vegetation appears green to the human eye only because green reflectance is dominant over the range of wavelengths to which the eye is sensitive (0.4-0.7 micrometers). Vegetation is usually darker in tone on the red band imagery because of the low reflectance of these wavelengths (chlorophyll absorption).

Whichever band is used in interpretation, the density-vigor of the vegetation and the amount of soil or other background features greatly influence the interpreter's ability to discern specific crop or forest areas or phenological changes in this vegetation. The satellite has essentially a vertical view of all those features below it and an object's appearance results from an integration of all these features.

The ability-training of an interpreter to successfully evaluate ERTS imagery depends upon his understanding of the few concepts presented above. Implicit in these is the recognition of how interpretation factors such as shape, size, tone, pattern, texture and topographic position interact with object appearance.

Consideration must additionally be given the changing factors of atmospheric aerosol and solar illumination. Atmospheric aerosol, visible as haze, reduces the contrast between objects. Imagery obtained under these conditions will have a uniform grayish-white frosted appearance. Scattering of light by the aerosol (Rayleigh scattering) produces this effect and is more acute in shorter wavelength bands.

Solar elevation differences also influence object appearance. For a given latitude and time of day the solar elevation and illumination differs throughout the year. These factors cycle continuously, with summer high-points and winter lows. There will be a general darkening of the imagery in all bands as solar elevation and illumination decreases.

## Site Location on the ERTS Imagery

The forest and crop areas at each test site must be located accurately on the imagery for the interpretation studies. Comparisons of the same areas over different dates are necessary for continuity.

The general site area can be quickly located using a World Aeronautical

Chart (WAC). These charts and the 9 x 9 inch ERTS products have the same scale. The latitude and longitude of the site should be marked on the map. Then the band 7 transparency covering the site is overlayed on the WAC by aligning rivers, lakes or other prominent features appearing on both. Placing the chart on a low intensity light table often highlights the map details and facilitates the alignment. The general site location (latitude-longitude mark) is then marked on the imagery with a grease pencil. This point is then transferred from the band 7 imagery to any other band by aligning the corner fiducial marks of the two images and with the alternate band on top, marking through the latitude-longitude mark from the band 7 imagery.

The specific forest or crop site is then located using larger scale charts and photographic enlargement of the imagery. The exact site is marked on a USGS quadrangle sheet (scales of 1:62,500 to 1:24,000). Then roads, forest boundaries or other features shown on the map, and visible on the imagery, are referenced on the imagery to close in on and exactly locate the study areas. Comparisons of map details with 7X photographic enlargments of the imagery usually make identification of the site much easier. Use of a 5-10X hand lens to study the ERTS transparencies also often facilitates this work.

Visual Correlations with Phenological Changes

Seasonal changes in vegetation can be correlated visually with tonal changes on the satellite imagery. Bands 5 and 7 provide a good basis for such studies. Forest stands usually lighten in tone on band 5 and darken in tone on band 7 as autumn leaf coloration and fall progresses. These tonal differences can be explained by considering the interpretation factors discussed above. Many crops follow this same pattern as they mature and are harvested. Spring-summer sequences give a reversal of these developments.

The correlations are made by comparing visually the imagery tonal changes of forest and crop areas with ground observation photography taken of the same area on the same dates. The ground photography consists of color slides taken by trained field personnel. These slides document the stage of phenological development of site vegetation at and between given dates.

## Density Analysis of ERTS-1 Imagery

Visual interpretations of imagery and correlations with ground observations are subject to human judgment. An objective method of analyzing the imagery and verifying the interpretations would seem desirable. Film density measurements on the transparencies are one way to obtain objective data which will be indicative of tonal changes. Considering any given spectral band, the density of an area is inversely related to the reflectance for this area. Areas with high reflectance will have a low density and light tone. Imagery density is also relatively simple and inexpensive to measure with standard darkroom densitometers.

The site must be accurately located before density measurements can be made. This positioning is assured by the following procedure. Place a strip of clear film (acetate or mylar) over the imagery so that it covers the site and extends to the edge of the transparency. Securely tape the film to the outer edge of the imagery so as to prevent side movement, yet allow the clear strip to be lifted and folded back. Then place the transparency with the attached clear overlay on a light table and put an ink dot on the clear film, marking the exact location of the site. The site location is then transferred to the overlays for imagery on other bands and dates by aligning the original and new images using obvious common features such as lakes, rivers and highways and putting an ink dot on the overlay strip covering the second transparency.

This procedure should give repeatable reference points.

The densitometer readings are now made using the ink dots as site references. The image with the ink-dotted film taped on is placed over the aperture and light source of densitometer. The imagery is shifted until the dot blocks the light source, thus aligning the site directly under the measuring head. The transparency is taped in place, the overlay folded back and the densitometer head lowered to make the measurement.

Several adjustment functions have to be made to standardize the original densitometer measurements. An instrument calibration adjustment should be made on all densitometer readings. The data necessary to calculate this correction for densitometers such as those manufactured by the Welsh Scientific Company is obtained by comparing instrument readings with a density wedge standard made by Eastman Kodak. This data is plotted and a graphically plotted adjustment curve is constructed. A further refinement of this technique is suggested for use in adjusting ERTS imagery density readings. The densitometer readings and gray scale readings are run through a simple linear regression and a prediction equation for adjusting the instrument readings to calibrated readings is derived. This equation and others discussed below can be written into computer programs that will greatly reduce the workload in the correction of large numbers of density readings.

Further adjustment of the densitometer readings is required for possible differences in processing between different dates. This is accomplished by measuring the density at several known points on the imagery's fifteen wedge steps. A simple linear regression equation is then developed for each pair of dates so that the equation adjusts the readings at one date back to comparable readings at the base date.

A final adjustment for differences in solar elevation and atmospheric transmission between dates should then be made to each reading, after having gone through the two least squares adjustments. This adjustment is in ratio form and is calculated using solar radiometer readings (the procedure is outlined in a recently written LARS-Purdue working paper). These corrections in total should give resultant densities indicative of actual vegetation reflectances over different times.

Band-to-band density ratios can be used along with the density changes in individual bands to depict phenological changes. One ratio found to work well is: $R_{5-7} = \frac{\text{Density Band 5 - Density Band 7}}{\text{Density Band 5 + Density Band 7}}$. This ratio increases with vegetation development in the spring and decreases with the fall's seasonal changes.

Use of the Diazo Process for Making Color Transparencies

Sometimes a color infrared composite image is easier to interpret than the black-and-white imagery. However, the delivery of color products by NASA is often several weeks later than that for the other products. If one has an immediate need for color renditions of the ERTS imagery, they can be made using the Diazo process. Most visual-aids departments have the necessary equipment for this work.

The Diazo procedure is based on the Ozalid process. The Diazo film is exposed using ultraviolet light and developed in ammonia gas. The resulting image is identical to the one copied except for color. In other words, dense areas on the original are also dense on the Diazo product. The film used in the Diazo process comes in practically any color desired. Two types often used are Tecnifax Diazochrome color film by Scott Graphics and Spectra Diazo film by K & E. The University of Maine's processing machine is a Blu-Ray made in Essex, Connecticut.

The color composite process is started by making transparencies with different colors for black-and-white images of two or more of the four ERTS MSS bands. The black-and-white transparency and Diazo film of the desired color are placed in contact with each other and an ultraviolet light is shown through the imagery onto the emulsion side of the Diazo film. This is much like making a normal photographic contact print from a negative on a contact printer. After this the Diazo film is developed by exposure to ammonia gas. This process is repeated for each band and color combination that is required to make the final color image. To make a color infrared composite, three images are used (band 4, 5 and one of the infrared bands). The Diazo film colors to use for each band are:

| Band | Diazo Film Color |
|---|---|
| 4 | Yellow |
| 5 | Magenta |
| 6 or 7 | Cyan |

One other variable to consider in this process is the density of the Diazo image. It can be changed by varying exposure time. It has been found that trial and error is the best method of choosing the proper exposures. The composite image is formed by sandwiching together the color images in exact register using the corner fiducial marks for alignment. An overhead projector provides a good method to view the composite. This multi-layered affect can be distracting when the image is viewed directly without enlargement or a high intensity light source.

## Darkroom Techniques for Processing ERTS-1 Imagery

The ERTS-1 black-and-white transparency images are not suitable for many investigator uses. Examples are publication purposes and enlargements

needed in paper print form for interpretation studies. Standard darkroom procedures are used to make the necessary photographic transformations. The methods used are simple and permit the use of common dark room equipment and supplies.

To make a black-and-white positive print, a negative is needed. These negatives are obtained in one of two ways. For small-scale prints, such as 1:1,000,000, the 70 mm transparency negatives supplied by NASA can be used. However, these cannot be enlarged much more than three times without having exposure times in excess of that advisable for making prints with ordinary darkroom materials. NASA bulletin Vol. A, No. 13, January 15, 1973, describes a recommended procedure to be used when printing with these negatives. This paper also lists recommended exposure settings for various papers, enlargers and developers.

These negatives are very dense, making them difficult to use. By trial and error it has been found that for Band 5 imagery an exposure time of approximately 30 seconds with an 'f' stop of 8 (50 mm lens) on an Omega PRO-LAB D-6 enlarger set for a 3X enlargement will give a proper exposure on KODAK polycontrast rapid paper developed in Dektol (1:2) for 90 seconds. For a Band 7 negative the 'f' stop is 3.5 and the exposure time 20 seconds. These values will vary from frame to frame and the best method of determining the proper exposure for each new frame is to expose test strips.

New negatives must be made to produce enlarged prints at scales sufficient for detailed study of a site. The negative can be made on 33 mm Fine Grained Release Positive film Eastman Kodak 5302. This film has nearly the same emulsion as print paper and can be handled under safe lights and developed in Dektol. The first step in making the negative is to place the ERTS 9 x 9 inch positive transparency on a contact printer after having

noted the site location. To ensure making the negative so that it covers the site, the site area is masked using metal masking strips or by making a mask from any thin opaque material. The masks should be sized to allow the 35 mm film to fit in the mask opening with the opening placed over the site. The Fine Grained Release Positive film strip is then placed under the opening, on top of the transparency, and exposed. Test strips should be made to determine the exposure times required to produce negatives of any desired density. These negatives are at a scale of 1:1,000,000 and can be enlarged quite easily because of their fine grain and relatively lower density. Also, their larger scale as compared with the NASA 70 mm negatives gives less of an enlargement factor from which to make the larger scale prints.

One method of adjusting the enlarger to give a desired scale is to first trace details such as lakes, rivers and highways on a white sheet of paper from a map having the same scale as desired for the enlarged print. This paper is then placed on the enlarging easel and the enlarger, with negative in place is raised or lowered until the image projection fits the outline traced off the map. If a print is made with an unknown enlargement factor, the scale can be determined by measuring known distances between landmarks that appear on the print such as lakes, islands, major highway intersections and calculating the scale as a representative fraction:

$$\text{scale} = \frac{\text{photographic distance}}{\text{ground distance}}$$

The ground distance is usually scaled off from map measurements.

## Summary

These guidelines should give the interpreter interested in analyzing ERTS imagery some useful working methods. This discussion is certainly not all inclusive of the methods and problems encountered in working with multispectral satellite imagery. However, it should provide a good basis from which to start and have experience modify.

# APPENDIX M

## PLANT SPECIES COMPOSITION OF RANGE SITES IN THE ROCKY MOUNTAIN AND COLUMBIA VALLEY CORRIDORS

Since radiation reflectance of range vegetation will vary with different species, a survey was made in the Rocky Mountain and Columbia Valley corridors at each of the range sites to determine the approximate species composition based on vegetative cover. The predominant species for each of the ten range sites are listed in Table 1 to the nearest ten percent. The table includes both the scientific and common names of the range plants. The percentage values refer to the percent of the vegetative cover that is composed of the particular plant species.

Table 1: Approximate Percentage of the Total Vegetative Cover for the Predominant Species at Each of the Range Sites in the Rocky Mountain and Columbia Valley Corridors.

| | Scientific Name | Percent | Common Name |
|---|---|---|---|
| RM-1 | Festuca scabrella | 60 | Range fescue |
| | Festuca idahoensis | 20 | Idaho fescue |
| | Koeleria cristata | 10 | Prairie Junegrass |
| RM-2 | Bromus tectorum | 30 | Cheatgrass brome |
| | Stipa comata | 30 | Needle-and-thread |
| | Agropyron smithii | 20 | Western wheatgrass |
| RM-3 | Stipa comata | 90 | Needle-and-thread |
| | Opunh'a polyacantha | Trace | Prickley Pear |
| | Artemisia tridentata | Trace | Big Sagebrush |
| RM-4 | Agropyron desertorum | 60 | Crested wheatgrass |
| | Bromus tectorum | 20 | Cheatgrass (annual) |
| | Juniperus osteosperma | 10 | Utah Juniper |
| RM-5 | Ranunculus testiculatus | 60 | Buttercup, testiculate |
| | Bromus tectorum | 20 | Cheatgrass |
| | Sarcobatus vermiculatus | 10 | Greasewood |
| RM-6 | Artemisia filifolia | 30 | Sand sagebrush |
| | Gutierrezia sp. | 20 | Snakeweed |
| | Bromis tectorum | 20 | Cheatgrass |
| | Aristida sp. | 20 | Three-Awns |
| CV-7 | Stipa comata | 40 | Needle-and-thread |
| | Bouteloua gracilis | 10 | Blue grama |
| | Poa secunda | 10 | Sandberg bluegrass |
| | Agropyron smithii | 10 | Western wheatgrass |
| CV-8 | Poa pratensis | 40 | Kentucky bluegrass |
| | Cirsium arvense | 30 | Canada thistle |
| | Agropyron smithii | 20 | Western wheatgrass |
| CV-9 | Festuca idahoensis | 70 | Idaho fescue |
| | Phleum pratense | 10 | Timothy |
| | Bromus inermis | 10 | Smooth brome |
| CV-10 | Poa secunda | 30 | Sandberg bluegrass |
| | Agropyron spictum | 20 | Bluebush wheatgrass |
| | Chrysothamnus nauseosus | 10 | Rubber rabbitbrush |
| | Sitanion hystrix | 10 | Bottlebrush squirreltail |

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